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NUMISMATIC NOTES AND MONOGRAPHS

No. 9



COMPUTING JETONS

BY DAVID EUGENE SMITH, LL.D.

THE AMERICAN NUMISMATIC SOCIETY
BROADWAY AT 156TH STREET
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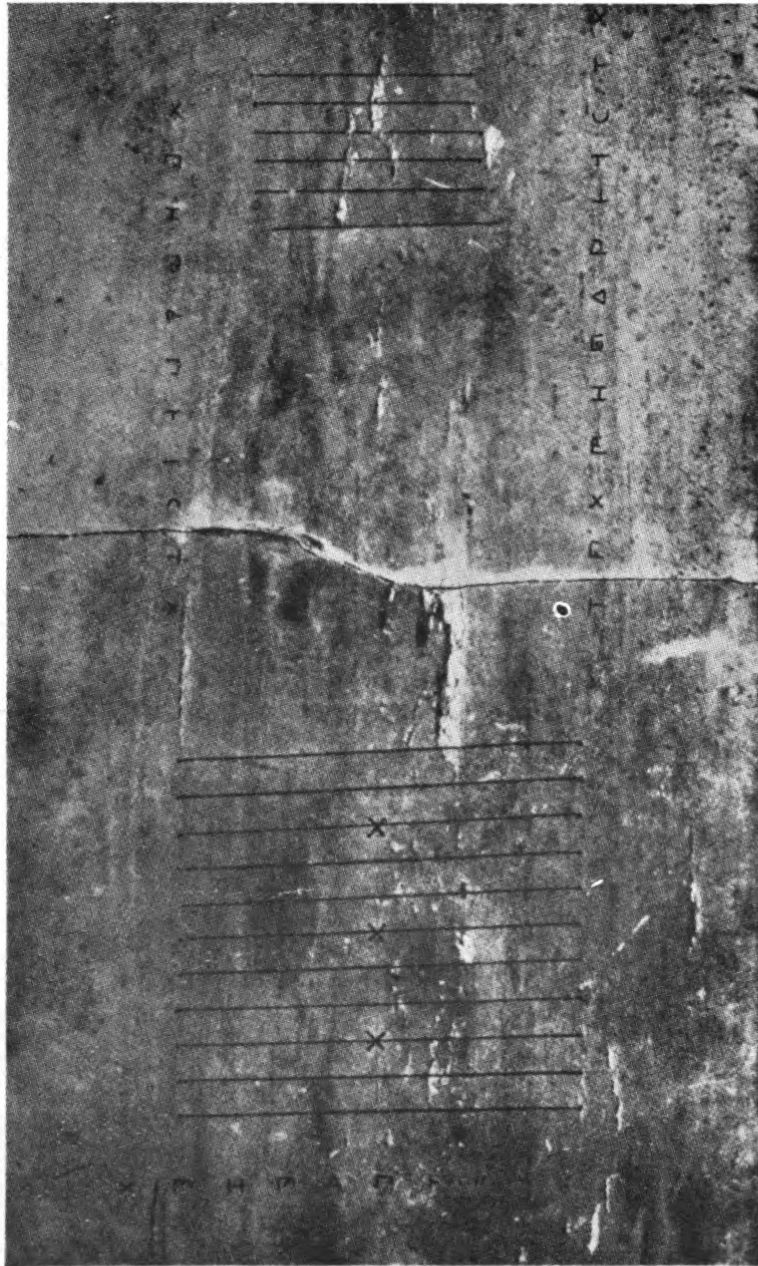
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NUMISMATIC

NOTES & MONOGRAPHS

NUMISMATIC NOTES AND MONOGRAPHS is devoted to essays and treatises on subjects relating to coins, paper money, medals and decorations, and is uniform with Hispanic Notes and Monographs published by the Hispanic Society of America, and with Indian Notes and Monographs issued by the Museum of the American Indian-Heye Foundation.



The Salmis Abacus

Found on the Island of Salmis in 1846

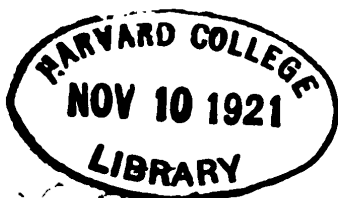
COMPUTING JETONS

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PREFACE

This monograph is based upon an address delivered by the author before the American Numismatic Society, in New York City, on February 7, 1921. The purpose is set forth in the monograph itself, but the author wishes to take advantage of a prefatory page to express his appreciation of the kindness of the officers of the Society in asking him to prepare the address for publication. He also wishes to acknowledge the courtesy of George A. Plimpton, Esq., of New York City, in generously permitting the use of his large library of rare textbooks for the purpose of preparing most of the illustrations used in this work; and to express his thanks to L. Leland Locke, Esq., of Brooklyn,—himself a contributor to the history of notation and of mechanical computation, particularly in relation to the quipu,—for the kind assistance rendered by him in taking the photographs.

	I
<p>COMPUTING JETONS</p> <p>By DAVID EUGENE SMITH, LL.D.</p> <p>GENERAL PURPOSE OF THE ADDRESS</p> <p>In accepting the invitation of the American Numismatic Society to speak upon the subject of Computing Jetons, I have naturally considered the possibility of offering something that might appeal to its members as not already familiar. Few works upon any subject relating to numismatics are so exhaustive in their special fields as the monumental and scholarly treatise of Professor Francis Pierrepont Barnard (<i>Casting-Counter and Counting-Board</i>, Oxford, 1916), and hence it may seem quite superfluous, and indeed presumptuous, to attempt to supplement such a storehouse of information.</p>	
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	<p>Professor Barnard, however, approached the subject primarily from the standpoint of a numismatist, a field in which he is an acknowledged expert, as witness the honor that has recently come to him in his appointment as curator of coins and medals in the Ashmolean Museum at Oxford, and so it has seemed to me that I might make at least a slight contribution by approaching it from the standpoint of a student of the history of mathematics. It would, in that case, be natural to consider primarily the need for, the use of, and the historical development of the jeton in performing mathematical calculations, and this is the pleasant task that I have set for myself in preparing this monograph.</p> <p>Although Professor Barnard has also considered this field, I hope to contribute something in the way of illustrative material, at least, and perhaps to make somewhat more prominent the early history of a device which, in one form or another, seems to have dominated practical calculation during a good part of the period of human industry.</p>
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NECESSITY FOR AIDS IN COMPUTATION

The numeral systems of the ancients were never perfected sufficiently to allow for ease in general computation. The Babylonian notation, adapted to a combination of the numerical scales of ten and sixty, and limited by the paucity of basal forms imposed by the cuneiform characters, was ill suited to calculation; the Egyptian and Roman systems were an improvement but they failed to meet the needs of computers when the operations extended beyond subtraction; the several Greek systems finally developed into something that was rather better than their predecessors, but they also failed when such an operation as division had to be performed with what we would call reasonable speed. The difficulty may easily be seen by considering two numbers (6469 and 2399) written in one form of Roman notation of the time of the Caesars:

VI ∞ CCCCLX VIII
II ∞ CCC LXXXVIII

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	<p>For purposes of adding, these forms are simple enough. While they take longer to write than ours, the actual addition can be quite as readily performed as by us, and moreover it is evident that no addition table need be learned, the entire operation reducing to little more than counting. When we come to multiplication or division, however, the Roman notation was, like practically all others of ancient times, very cumbersome. Even as perfected, or at least as changed, in medieval times, the multiplying of $\overline{\text{c. lxxiiij. ccc. l. i}}$ by $\overline{\text{.vi. dc lxvi}}$ (to take two cases from the twelfth century), or of $\text{cI}\overline{\text{. I. ic}}$ by $\text{Dccxcj Uccxxxiiij q}^\circ\text{s DI x U}$ (to take a Dutch form and a Spanish form, both of the sixteenth century) would have discouraged almost any computer. Even the greatest mathematicians of antiquity, the Greeks, had serious difficulty in using their most highly developed numerals in the division of, for example, /ATMB by PE (that is, 1342 by 105).</p>
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There is another reason why the ancient systems were such as to demand some kind of mechanical devices to aid the computer. Even had our present convenient numerals been known, the ancients had no simple way of using them. We do our computation on paper, but rag paper was unknown before the first century, and our cheap paper is a very recent invention. Papyrus seems to have been generally unknown in Greece before the seventh century B. C., although it had long been used in Egypt; parchment was an invention of the fifth century B. C.; while tablets of clay or wax were quite unsuited to extensive numerical work. The situation was, therefore, a serious one for those who, in Babylonia, computed numerical tables for the astrologers and astronomers; and for the merchants and money changers of the Mediterranean countries who, after coinage appeared in the seventh century B.C. had need of more extensive calculations than their predecessors in the commercial field had required.

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	<p data-bbox="786 436 1089 464" style="text-align: center;">THE DUST ABACUS</p> <p data-bbox="594 506 1289 1619">To meet the needs imposed by these cumbersome systems of notation the world devised, from time to time and in different parts of the earth, various forms of an abacus. Originally the term seems to have been used to mean a board covered with a thin coat of dust (Semitic <i>abq</i>, dust). Upon this board it was possible to write with a stylus, and the figures could easily be erased. Such devices, occasionally referred to by early writers, could hardly have been of much service except in connection with such temporary work as the computation with small numbers. Indeed, among the several doubtful etymologies of the word that have been suggested is the one that the Greek <i>abax</i> came from <i>alpha</i> (the letter standing for 1), <i>beta</i> (the letter standing for 2), and <i>axia</i> (relating to value). The dust abacus may also have given the name to the <i>gobar</i> (dust) numerals, which were used by the Moslems in Spain. The instrument, therefore, served the same purpose as the</p>
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<p>wax tablet of the Greeks and Romans (a device that remained in use in Europe until the eighteenth century), as the more modern slate, and as the paper pad of the present day. The blackboard found in our schools is a late descendant of this type of abacus, as is also the wooden tablet used in the native Arab schools at the present time.</p> <p>EARLY FORMS OF THE LINE ABACUS</p> <p>The dust abacus was a crude affair compared with its successor, the line abacus. This instrument had various forms. At first it seems to have been a ruled table similar to the specimen found in 1846 on the island of Salamis. Upon the ruled lines the computer placed counters (Greek $\psi \tilde{\iota} \phi \omicron \iota$, pebbles),—the units on one line, the tens on the next, and so on. Such instruments are referred to by several early writers, and Herodotus, for example, compares the Greek and the Egyptian forms, saying that the inhabitants of the Nile valley “write their characters and reckon with pebbles, bringing</p>	
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	<p>the hand from right to left, while the Greeks go from left to right," these being the respective directions taken in the Egyptian and the late Greek writing.</p> <p>Sometimes the counters were placed loosely on the lines, and sometimes, though at a much later period, they were fastened to the table by being fixed in grooves or by being strung on wires or rods. Several apparently late Roman pieces showing the grooved abacus are extant, while the Chinese <i>swan pan</i> shows the counters strung like beads upon wires or rods.</p> <p>THE ROMAN COUNTERS</p> <p>There are numerous classical references to the abacus, and particularly to the loose counters from which the later jetons were derived. Horace, for example, speaks of the schoolboy with his bag and tablet hung upon his left arm, the tablet being some type of abacus, perhaps the one covered with wax. Juvenal mentions both the tablet and the counters, and Cicero and Lucilius refer to brass counters when they speak of the <i>aera</i>.</p>
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The common Roman name for these counters was *calculi* or *abaculi*. The word *calculus* is a diminutive of *calx*, meaning a piece of limestone and being the root from which we have our word "chalk." A *calculus* is, therefore, simply what we call a "marble" when referring to a small sphere like those which children use in playing games. From the fact that these *calculi* were used in numerical work we have the word *calcolare* (literally "to pebble," or "marble"), meaning to calculate or compute. The word *calculus*, used in this sense, was transmitted by the Romans to medieval Europe and was in common use until the sixteenth century. When it was abandoned as referring to a counter it was adopted as a convenient term to indicate the branch of higher analysis which is now generally known as "the calculus." It is still used in various languages, however, to refer to elementary work with numbers.

As to the actual *calculi* used by the Romans, we have no specimens that can be positively identified. Thousands of

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	<p>small disks have, however, come down to us, generally classified as gaming pieces, and there seems to be no doubt that these also served the purpose of counters. The Romans have left records of such games as the <i>Ludus latrunculorum</i> and <i>Ludus duodecim scriptorum</i>, in which they employed pieces which they spoke of as <i>calculi</i>, so that the disks that were used in ancient games like checkers and backgammon were called by the same name as the computing pieces. Indeed, this same custom is found in the case of the jetons of modern times, particularly in the seventeenth and eighteenth centuries, when the computing pieces began to be used solely in gaming, a custom to which we owe our poker chips, just as we owe our billiard markers to a late form of the Roman abacus. It is, therefore, quite safe to say that the small disks so often found in Roman remains represent both computing and gaming jetons. Indeed, it is probable that the tradesman paid little attention to the size, shape, or material of the <i>calculi</i> which he used in his computations.</p>
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II

THE ABACUS IN THE ORIENT

The early Chinese, not only before the Christian era but for more than a thousand years after this era began, made use of counting rods. These were laid upon a computing table and were used in somewhat the same way that the jetons were used in Europe. The rods were commonly made of bamboo, although sometimes, as in the sixth century, iron pieces were used. The early literature shows that the wealthy class often employed ivory rods.

At least as early as the twelfth century, and we have no positive knowledge of the matter before that time, the Chinese computers replaced the "bamboo rods" by sliding beads, the new instrument being known as the *swan pan* (computing tray). Where they obtained their idea we do not know, but there is some reason for believing that it came from Central or Western Asia. At any rate they adopted a form that was quite like the late Roman abacus except that the beads were made to slide upon rods instead of in grooves.

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一
萬 千 百 十 一 分 厘 毫 絲

									商	圖
≡		≡		⊥		⊥	⊥	⊥	實	
—	⊥	≡							方	
—		⊥	⊥						廣	
		=		=					禹	
									三	
									四	

Counting Rods

As shown in early Chinese works, being used in this case to represent numerical coefficients in algebra

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This form has not changed materially since the earliest illustrations that have come down to us in books or manuscripts, and is still used by all Chinese computers at home and abroad. Unless they, in time, adopt some more modern form of a calculating machine, there seems to be no good reason for abandoning the *swan pan*, since it permits of more rapid calculation than is possible with pencil and paper,—at least in the most common numerical operations of commercial life.

In the field of algebra, where the coefficients that enter into an equation are usually relatively small, the rods continued to be used until European mathematics replaced the Oriental, largely owing to the influence of Jesuit scholars in the seventeenth and eighteenth centuries.

The Koreans received their mathematics from China and transmitted it to Japan. The computing rods (their *ka-tji-san*) were adopted, and they were transmitted to Japan in the form of *chikusaku* (bamboo rods), but they were later modified into rectangular pieces known as *sanchu* or

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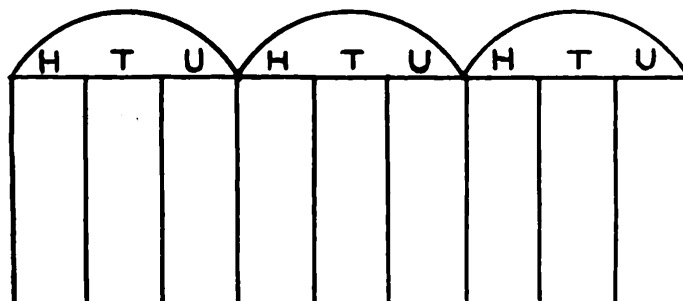
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	<p><i>sangi</i>. The rods remained in use in Korea until the nineteenth century, and in algebraic work they continued to be employed by Japanese scholars until the European mathematics replaced the ancient <i>wasan</i> (native mathematics).</p> <p>In the sixteenth century, however, Japan adopted a form of the Chinese <i>swan pan</i>, under the name <i>soroban</i>, improving upon the shape and arrangement of counters, and this instrument is still in universal use by her computers.</p> <p>In Central and Western Asia, perhaps in the late Middle Ages, a type of abacus developed, which the Turks now call the <i>coulba</i> and the Armenians the <i>choreb</i>. It passed thence to Russia where it is known as the <i>stchoty</i> and is still generally used. The form differs materially from the Roman and Oriental ones, but served the same purposes. Each line of this abacus consists of ten beads, these being strung on wires and being so colored as to allow the eye to recognize without difficulty the various groups of fives as they appear in the rows.</p>
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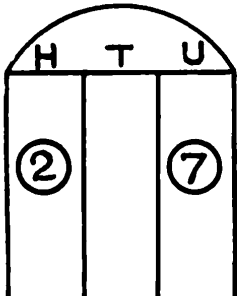
THE GERBERT ABACUS AND JETONS

From the standpoint of jetons, only two forms of the abacus, as it appeared in Western Europe, have any interest for us. One of these was called by the early writers the Pythagorean Table (*mensa Pythagorica*), a term also applied to one form of the multiplication table. The other was known as the arc abacus, or Pythagorean Arc (*arcus Pythagoreus*), but may very likely have been due to Gerbert (Pope Sylvester II, c. 1000), who is known to have used it. This arc abacus consisted of a table marked off in columns surmounted by arcs, thus:



The letters H, T, and U stand for hundreds, tens, and units.

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16	<p style="text-align: center;">COMPUTING JETONS</p> <p>Gerbert had an artisan make nine sets of counters, and upon each of the first was the figure 1, upon each of the second the figure 2, and so on, those of the last set having the figure 9. If he wished to represent the number 207, for example, he placed the counters as follows:</p> <div style="text-align: center;"><p>The diagram shows a semi-circular arch over three vertical columns. The columns are labeled H, T, and U from left to right. The H column contains a counter with the number 2, and the U column contains a counter with the number 7.</p></div> <p>It will be seen that, had Gerbert known the zero, he would not have needed counters at all, for he would have written 207 on a wax tablet. Since the zero came to be known in Europe at about that time, Gerbert's form of the abacus and his peculiar jetons with numerals upon them were very short lived, and they made no impression upon the methods of mechanical calculation employed by his successors.</p>
	<p style="text-align: center;">NUMISMATIC NOTES</p>

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<p>THE LATE EUROPEAN LINE ABACUS</p> <p>We are quite ignorant as to the forms which the abacus assumed in various parts of Europe between the time of the Fall of Rome, in the fifth century, and the advent of the line abacus of the late Middle Ages. We only know that the earliest form that has come down to us in the medieval manuscripts and in the arithmetics of the first two centuries of printing is substantially as shown on pages 18-24.</p> <p>The earliest printed illustration of the arrangement of counters on the table is the one given in the <i>Algorithmus Linealis</i> (Leipzig, c. 1488; the facsimile is from the edition of c. 1490). The work was published anonymously, but was probably written by Johann Widman, a mathematician of considerable prominence and then residing in Leipzig. The arrangement of the counters representing 1,759,876 is shown in the column at the right. The middle column shows the same number written in a different fashion for purposes of subtraction. The column at the left shows the number</p>	
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jede zal durch die ziffer lerne schreiben vnd auß-
 sprechen. Dieweil ich im anfang des büchleins
 das selbig genugsam erkläret / wil ich anfangen
 von bedeutung der linien also. Die vnterste li-
 ni bedeutet eins / die ander ob jr zehē / die drit hun-
 dert / die vierd tausent / die fünfft zehentausent /
 also fort die negst vbersich alweg zehēmal sovil.
 Die feldung zwischen zweyē linien heist das spa-
 cium / gilt halb sovil als die negst ober lini / oder
 fünffmal sovil als die negst vnter lini / wienach
 folgende figur thut abweyssen.

Fünffhun:tau:	_____	500000
Hundert tau:		100000
Fünffzig tau:	_____	50000
Zehen tau:		10000
Fünfftau:	x	5000
Tausent	_____	1000
Fünffhundert		500
Hundert	_____	100
Fünffzig		50
Zehen	_____	10
Fünff		5
Eins	_____	1
Ein halbs		$\frac{1}{2}$

In aussprechung einer zal / heb oben an sprich
 das hundert sampt seinē obern spacio allein aus
 sonst nim alweg zwo linien sampt irē obern spa-
 cium zusammen wo zu beiden orte zal pfennig li-
 gen. Auch / von mehr sicherheit wegen / sol das

Christoff Rudolff's *Kunstliche rechnung mit
 der ziffer vnnd mit den zalpfennige*, 1526

From the edition of 1534

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	<p>1,666,666. A small cross was usually placed upon thousands' line, and one on millions' line, as here shown, the purpose being to aid the eye in reading the numbers.</p> <p>Although there were special modifications of the line abacus, the general type is the one on page 19. The illustration is from Christoff Rudolff's <i>Kunstliche rechnung mit der ziffer vnnd mit den zalpfenninge</i> (Vienna or Nürnberg, 1526; the facsimile is from the Nürnberg edition of 1534, fol. D. vj. v). Rudolff was one of the best German mathematicians of his time, and counter reckoning made very little appeal to him. Nevertheless, in writing an arithmetic for popular use, he was forced to include it. He gave only one illustration of the counting board, as here shown, but he explained the use of the device in performing the several elementary operations as they were reached in the text.</p> <p>An interesting variant of the table given by Rudolff is one here shown from the <i>Arithmetica</i> of a Polish teacher, Giřjka Gōrła z Gōrřlssteyna, whose book appeared</p>
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První Trařít

to wryso potrebiti gest počtu w čicúho/čho
 dy od Čtwerý Linýe / genj gest Říčstena
 znamenana / znova počítay geden Tisýc/
 parau Ljnu Deset Tisýc / Šestau Ljnu
 Što tisýc / Sedmau Ljnu Tisýc Tisýcúw.
 Še pať Spacium neš pole mezy Linami
 wždy polowicy tolik platij jako Ljna / to
 mu sř člegij z této Tabule porozumijš.

Wyswětlení Ljnu a Spa- cium.

1-0-0-0-0-0-0	X	●	X	Tisýc Tisýcú
5 0 0 0 0 0		●		pět Set Tisýc
1-0-0-0-0-0		●		Što Tisýc
5 0 0 0 0		●		padesat Tisýc
1-0-0-0-0		●		Deset Tisýc
5 0 0 0		●		pět Tisýc
1-0-0-0	X	●	X	Tisýc
5 0 0		●		pět Set
1-0-0		●		Što
5 0		●		padesat
1-0		●		Deset
5		●		pět
1		●		Sedma
0		●		půl

při tom aby znal / na čterautoli Ljnu
 přst se položí / že ta toliko gedno znamená /
 Spacium podněj půl / nad nj pět / Druhý
 Deset

Görle's *Arithmetica*, 1577

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	<p>at Czerny in 1577. This particular work has been selected partly because of its rarity, and partly because the form of the explanatory diagram differs somewhat from the more common type found in other parts of Europe.</p> <p>A further illustration of the method of explaining the table may be seen from the line abacus shown in Spänlin's <i>Arithmetica</i> (Nürnberg, 1566, page 8).</p> <p>When arranged for monetary computation, the table was commonly divided into columns, each being called a <i>Banckir</i> or a <i>Cambien</i>. In each <i>Banckir</i> there were placed counters to represent respectively pounds, shillings, and pence, or similar denominations according to usage of the country. The illustration on page 24 is from <i>Das new Rechēpüchlein</i> of Jakob Köbel (Oppenheim, 1514, but from the 1518 edition, fol. VIII, r). The page has a further interest in the fact that both Roman and Hindu-Arabic numerals are shown, although in general Köbel preferred the former as being the ones more commonly used in his day.</p>
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Spaciū/ vnter seirer lini/ halb souil als die
 selb linien/ wie hie im werck bereit gesehen.

Erst Cambi.		Anter Cambi.	
x	tausent		
m	tausent	X	fünff tausent
c	hundert		fünff hundert
x	zehen		fünffzig
i	eins		fünff

ein halbe.

Auß disem/ wie gesezt/ volgt/ so es sich be-
 geb/ dā zwen zalpfeining in ein spaciū leaē/
 daß dieselben auffgehbt/ vnd einer darfür
 auff die nechst lini hinauff gelegt werde/ der
 gleichen so 5 zalpfeining auff einer liniē/ die
 selben sollē auch auffgehbt/ vñ einer darfür
 hinauff in das nechst spaciū gelegt werden:
 wie aber diß alles zumachē/ hastu in dē spe-
 cies nechst volgend gnugsam zuuermerckē.

Additio.

Item/ Einer gibt auß zu Nördlingē 74 R
 16 s. p. lāß/ mehr 35 R. 12 s. p. 20 schmalß/
 mehr 29 R. 10 s. p. federn/ geht vnterost darauf

Spanlin's *Arithmetica*, 1566

Rechenbanck.

Die Erst Banck oder Cambien	Die Zweit Ban- ck oder Cambien	Die Dert Bäckie oder Canmbien
Gulden	Alt	ſ

Der Zweit Vnderſcheyt iſt vñ

Bereutig d Linie vñ Rechēfening ſo daruf gelegt ſein.

Ear iſt/ das die vnderſt linig/ Eins bereut.**D**ie zweit/ Zehē/ **D**ie drit/ Hundert/ **D**ie**F**ierd/ Tausant/ **D**ie funfft/ Zehē Tausant/**D**ie Sechſt/ Hundert Tausant/ **D**ie Sybent/ Taus-

ſant Tausant z. c. Vnd also auff vnd auff zū zehē/ So vil

der Linien gemacht werden/ Bereut ein yede Linig Zeh-

en mal als vil als die nechſt Linig vñ ir. Des zū ſicht-

licher anſchawung nim diß Exempel.

Tausant mal Tausant	M ⁹	●	1000000
Hundert Tausant	C ⁹	●	100000
Zehen Tausant	X ⁹	●	10000
Tausant	M	●	1000
Hundert	C	●	100
Zehen	X	●	10
Eyns	I	●	1

Jakob Köbel, *Das new Rechēpüchlein*, 1514

From the edition of 1518

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Arithmetics that related to the use of counters on the line abacus were called by such names as *Algorismus linealis*, *Algorithmus linealis*, and *Rechenbüchlein auff der Linien* (Albert, 1534). The word *algorismus* referred to arithmetics that did not use counters. It is a medieval Latin form of the Arabic al-Khowarizmi, that is, "the man from Khwarezm," the country about the modern Khiva. This man was Mohammed ibn Musa al-Khowarizmi,— "Mohammed the son of Moses, the Khwarezmite," the first of the Arab writers, under the Caliphs at Bagdad, to prepare a noteworthy arithmetic based upon the Hindu-Arabic numerals. There was, therefore, no propriety in speaking of a "line *algorismus*," since algorism was quite the opposite of reckoning with counters on the line abacus. The original meaning of the term was lost in the late Middle Ages, however, and the word *algorismus* was applied to both types of arithmetic. Some of the textbooks, such as the popular German one by Adam Riese (1522), taught both counter and written

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	<p>reckoning, and bore such names as the one which this famous Rechenmeister gave to his second work, <i>Rechnung auff der Linien und Federn</i> (Computing on the lines and with the pen). Similarly, Jodocus Clichtoveus, a native of Nieuport, in Flanders, published in Paris (c. 1507) his <i>Ars supputandi tam per calculos q3 notas arithmeticas</i>, a work which represented about the last of the old counter reckoning in the higher class of Latin arithmetics published in France.</p> <p>A boy (for the girl rarely learned anything about computing) who knew the line abacus was said to "know the lines." So Albert, who wrote in 1534, says: "Die Linien zu erkennen, ist zu mercken, das die underste Linien (welche die erste genent wird) bedeut uns, die ander hinauff zehen, die dritte hundert," and so on. When he represented a number by means of counters on the line, he was said to "lay" the sum, as when the same writer says, "Leg zum ersten die fl.," an expression that may be connected with the present one of laying a wager. He was</p>
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often admonished to "lay and seize" carefully, as in the familiar old German distich,

"Schreib recht | leg recht | greiff recht | sprich recht |
So koempt allzeit dein Facit recht,"

in which the term *facit* had been brought over from the Latin schools.

The intervals between the lines (*lineae*) were called "spaces" (*spatia* or *spacia*). In performing the operations, however, and in representing different monetary units like pounds, shillings, and pence, it was convenient to divide the abacus vertically, as already stated. It was because these divisions were used particularly by the money changers that they were known to the German merchants not only as *Banckir* but as *Cambien*, or *Cambiere*, from the Italian *cambia* (exchange),—one of many illustrations of the indebtedness of northern merchants to their fellow tradesmen and bankers in the South. The *Cambien* were also called "fields" (*Feldungen*).

The use of such a term as *Cambien* suggests the desirability of beginning the study of the line abacus in Italy. This, however,

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	<p>is not a satisfactory plan, for the Italians were, owing partly to geographical reasons, the first of the leading European nations to adopt, for practical mercantile purposes, the Hindu-Arabic numerals, and hence they had generally abandoned the line abacus as early as the twelfth century. Indeed, when Leonardo Fibonacci wrote his great treatise on arithmetic, in the year 1202, he felt justified in calling it the <i>Liber Abaci</i> although the abacus is not described anywhere in the work, showing that the term had already come to mean simply arithmetic. We have no treatise extant that gives us any clear information as to how the earlier Italians of the Middle Ages computed with the counters. By the opening of the Renaissance the art was a lost one. The Venetian patrician, Ermolao Barbaro, who died in 1495, said that, in his time, such devices were used only among the barbarians, having been so long since forgotten in Italy as to need explanation,—</p> <p>“Calculos sive abaculos . . . eos esse intelligo . . . qui mos hodie apud barbaros fere omnes servatur.”</p>
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By way of contrast with the situation in Italy, Heilbronner, in his *Historia Mathematicae Universalis* (Leipzig, 1742) says that, even as late as about the middle of the eighteenth century, counters were used by merchants in Germany and even in France,—"in pluribus Germaniae atque Galliae provinciis a mercatoribus,"—defining the art of computing on the line in these words: "arithmetica calculatoria sive linearis est Scientia numerandi per calculos vel nummos metallicos."

The method of using the line abacus varied considerably. In rare cases, only the lines were used, each line counting as tens of the line just preceding, a method having a counterpart in the Russian *stchoty* of to-day. In others, only the spaces were used, the plan being similar to the one just mentioned. Specimens of this type of abacus are to be seen in the National Museum at Munich and in the Historical Museum at Basel. In this form the spaces generally represented monetary values, such as farthings, pence, shillings, pounds, 10 pounds, 100 pounds, and 1000 pounds.

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	<p>NAMES FOR COUNTERS OR JETONS</p> <p>Since the counter was cast, or thrown, upon the computing board, the name applied to it was often connected with the word "cast" or "throw." The Medieval Latin writers followed those of classical times in calling counters by such names as <i>calculi</i> and <i>abaculi</i>, but later computers also recognized the notion of casting. On this account they gave to the counters the name <i>projectiles</i> (<i>pro-</i>, ahead, + <i>jacere</i>, to cast). In translating this term the French dropped the prefix, leaving only <i>jectiles</i>, which they translated as <i>jetons</i>, with such variations as <i>jettons</i>, <i>gects</i>, <i>gectz</i>, <i>getoers</i>, <i>getoirs</i>, <i>jectoirs</i>, and <i>gielons</i>. Referring to the casting of the counter, in connection with which we still hear occasionally the expression to "cast up the account," the older French jetons frequently bore such inscriptions as "Gectez, Entendez au Compte," and "Jettez bien, que vous ne perdre Rien." Similarly the Spanish computers spoke of the <i>giton</i>, but they early abandoned the use of the abacus.</p>
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The Netherland pieces were called *Werp-geld*, that is, "cast money" or "thrown money. They were also known by the name of *Leggelt*, that is, "laid money," as in pieces bearing the legend "Leggelt van de Munters van Holland."

In England the common name for the computing disk was "counter," a word which came down from the Latin *computare* through such French forms as *conteor* and *compteur*, appearing in Middle English as *countere*, and *contour*. Thus we are told, in a work of the early part of the fourteenth century, to "sitte down and take countures rounde . . . And for vche a synne lay thou down on Til thou thi synnes haue sought vp and founde," a passage that suggests an early use of the rosary, a symbol found in one form or another in the ceremonies of various religions. Indeed, the whole subject of bead counting or fingering, not merely among Christians but also among Buddhists and Mohammedans, is, like knot tying, closely connected with the abacus, and each has an extended and interesting history.

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	<p>In an English work of 1496, mention is made of "A nest of cowntoures to the King," and in the laws of Henry VIII (1540) there is the expression "for euery nest of compters," so that the use of "nest" to indicate the receptacle of the counters was for a long time common in England. Such a nest may very likely be referred to by Barclay (1570) when he speaks of "The kitchin clarke . . . Jangling his counters."</p> <p>When Robert Recorde, the first of the noteworthy writers upon mathematics whose works appeared in the English language, wrote his well-known <i>Ground of Artes</i> (c. 1542), counter reckoning had begun to occupy a subordinate place in the arithmetical training of the schoolboy. Not until the second part of his book, therefore, does Recorde say, "Nowe that you haue learned the common kyndes of Arithmetike with the penne, you shall see the same arte in counters." A century later, in an edition of this same popular work, a commentator speaks of ignorant people as "any that can but cast with Counters," reminding us of Shakespeare's</p>
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contemptuous reference to a shopkeeper as being merely a "counter caster."

From the use of the word "counter" in the above sense there came its use to designate an arithmetician. An example of this is found in a sentence of Hoccleve's (1420): "In my purs so grete sommes be, That there nys counter in all cristenste Whiche that kan at ony nombre sette."

The word also came to mean the abacus itself, as when Chaucer, referring to al-Khowarizmi as Argus, says:

"Thogh Argus the noble covnter
Sete to rekene in hys counter."

From this custom came the use of the word to mean the table over which goods were sold in a shop. The expressions "counting house" and "counting room" are, of course, of similar origin.

By reason of the resemblance of the counter to the common coins it was often called by such names as *nummus* and *denarius projectilis*, somewhat as we, in America, speak of a cent as a "penny," although the two are not the same in value.

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	<p data-bbox="800 407 1081 438" style="text-align: center;">THE EXCHEQUER</p> <p data-bbox="591 470 1284 1446">Although the Court of the Exchequer, or the Chambre de l'échiquier, would hardly seem to be connected with the jeton, the relation is an intimate one. The best source of our knowledge of this relationship is the <i>Dialogus de Scaccario</i> of one Fitz-Neal, who wrote in 1178. His work is written in the form of a catechism, the questions being proposed by a "disciple" and the answers being given by the "master." It is written in Latin and the word <i>scaccarium</i> is used for exchequer, from the old French <i>eschequier</i>, and the Middle English <i>escheker</i>. Substantially the same word was used in Italy in the fifteenth century to designate a plan of multiplication in which the figures were arranged as on a checkerboard. This gave rise to the "multiplicare per scacchiero" in the early years of the Renaissance period.</p> <p data-bbox="591 1457 1284 1593">In answer to a question from the disciple as to the nature of the exchequer, the master replies:</p>
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“The exchequer is a quadrangular surface about ten feet in length and five in breadth, placed before those who sit around it in the manner of a table, and all around it there is an edge about the height of one’s four fingers, lest anything placed upon it should fall off. There is placed over the top of the exchequer, moreover, a cloth bought at the Easter term, not an ordinary one but a black one marked with stripes being distant from each other the space of a foot or the breadth of a hand. In the spaces moreover are counters placed according to their values. . . . Although, moreover, such a surface is called exchequer, nevertheless this name is so changed about that the court itself, which sits when the exchequer does, is called exchequer. . . . No truer reason occurs to me at present than that it has a shape similar to that of a chessboard. . . . The calculator sits in the middle of the side, that he may be visible to all, and that his busy hand may have free course.”

The further description shows that, while the table was not the ordinary line abacus

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	<p>already described, the method of computing was essentially the one commonly used with counters. The court itself was therefore connected with the royal treasury and later with various financial matters of the realm. Indeed, just before Fitz-Neal wrote there appeared a record of "John the Marshal" being engaged "at the quadrangular table which, from its counters (<i>calculi</i>) of two colors, is commonly called the exchequer (<i>scaccarium</i>), but which is rather the King's table for white money (<i>nummis albicoribus</i>), where also are held the King's pleas of the Crown." In this connection it is interesting to recall the fact that the checkered board is still quartered the arms of the Earl Marshal of England.</p> <p>It may be mentioned, although any discussion of the subject at this time would carry us too far afield, that the subject of counters is also connected with the tally stick, with finger reckoning, and even with the modern calculating machine, each of which devices has an extended and interesting history.</p>
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METHOD OF COMPUTING WITH JETONS

Jetons were used for all the elementary numerical processes. These generally included notation, addition, subtraction, doubling, multiplication, halving, division, and roots. Some books had special treatments for the Rule of Three and progressions. Doubling and halving were ancient processes, going back to early Egyptian times and intended primarily to assist in multiplication, division, and the treatment of fractions.

It will suffice to show the general nature of the use of the counters if we consider a few illustrations from the early printed books and manuscripts on arithmetic. For this purpose I have selected cases not individually considered (with one exception) in Professor Barnard's treatise.

As to notation, this has already been sufficiently explained. It will make the subject seem somewhat more real, however, if we consider a single illustration of the counting board laid for actual use. Several such illustrations are given on the

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**Ain Nerv geordnet Rech
en biechlin auf den linien
mit Rechen pfeningen: Den
Jungen angenden zu heis
lichem gebrauch vnd hend
eln leychtlich zu lernen
mit figuren vnd exempeln
Volgethernach klär
lichen angezaigt.**



Jakob Köbel, *Ain Nerv geordnet Rechen-
biechlin*, 1514

Illustrating the placing of the counters

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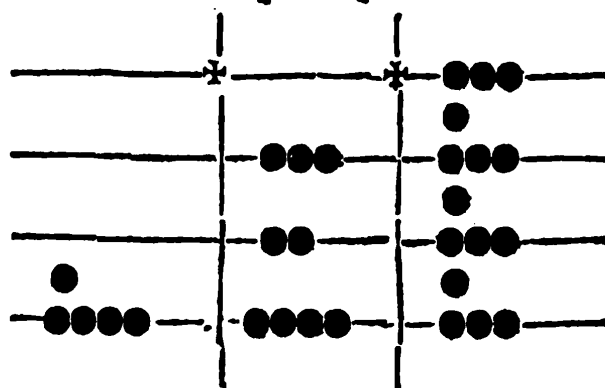
titlepages of sixteenth-century arithmetics, but one of the clearest is found in Köbel's *Ain Nerv geordnet Rechenbiechlin auf den linien mit Rechenpfeningen* (Augsburg, 1514) and is here shown in facsimile. One *Cambien* has the number 26 and the other has 485 (with possibly one or more counters on the lowest line).

As to the further operations, my only excuse for venturing into a field which Professor Barnard has so thoroughly treated is that this elementary presentation may serve to popularize the subject and that I may place before those who are interested in computation certain facsimiles that are not to be found in his treatise. Professor Barnard has considered chiefly the works of Gregorius Reisch (1503), Nicholas von Cusa (1514), Köbel (1514), Sileceus (1526), Robert Recorde (c. 1542), Trenchant (1566), Perez de Moya (1573), John Awdeley (the printer, 1574, the author being unknown), and François Legendre (1753, not the great Legendre), besides the anonymous *Li Liure de Getz* (c. 1510). These authors he has

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	<p>considered more fully than could well be attempted in the space at my disposal. Since some of the works represent the best sources, I am compelled to refer to them, however; but in the main I have given illustrations from other sources in order to supplement his treatment in certain particular features.</p> <p>The illustration from Caspar Schleupner's <i>Rechenbüchlein Auff der Linien</i> (Leipzig, 1598) shows how the table was arranged for the reduction of Thalers to Groschen and Hellers. The problem is to reduce 9 Thalers to Groschen and then to Hellers, 36 Groschen being equal to a Thaler, and 108 Hellers being equal to a Groschen. The left-hand <i>Banckir</i> denotes 9 Thalers, the result of the reduction to Groschen (324) appears in the next column, and the result of the reduction to Hellers appears at the right.</p> <p>Schleupner was one of the last of the Nürnberg Rechenmeisters to give serious attention to counter-reckoning. The work has few equals in the way of a simple presentation of the subject.</p>
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Nun folgen beyder Münz nach der
 Thaler vnd groschen Resolution/et.
 dagegen widerumb der heller vnd
 groschen/et. Reduction auch
 hernach.



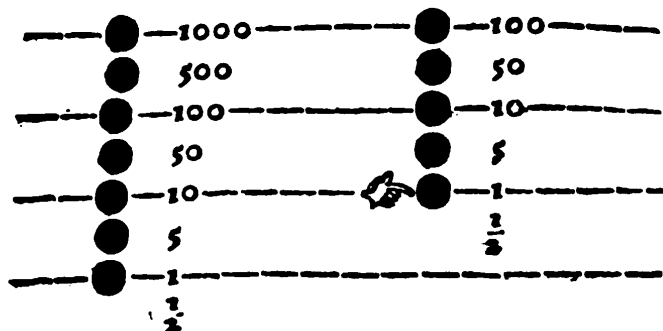
Als hieoben/ so du abgefaßte figur
 von formen an/ bey den 9. fl gegen den
 groschen vnd hellern ansiehst/ so hastu das
 Resoluirn solcher grossen Münze in klei-
 nere/ daß die 9. taler 324. fl/ vnd solche
 324. fl 3888. s machen/ so du aber
 gedachte figur von den hellern an/ zu rück
 ansiehst/ so hastu dagegen das Reducirn
 solcher kleinen münze in grössere/ daß das
 gegen durch die Reduction/ die 3888. s
 324. fl vnd die 324. fl die 9. taler mas-
 chen.
 Sohn.

Caspar Schleupner, *Rechenbüchlein Auff der
 Linien*, 1598

Illustrating reduction of monetary units

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	<p>The fundamental operations in arithmetic which we commonly limit to addition, subtraction, multiplication, and division, were subject to no such narrow limitation in the medieval and renaissance periods. As already stated, numeration, doubling (duplation), halving (mediation), roots, and certain other processes were often included. To illustrate the process of doubling, for example, 13 times 47 was often found by taking 2 times 2 times 2 times 47, adding 2 times 2 times 47, and then adding 47, thus reducing the process to doubling and adding. In a somewhat similar way, the reverse operation can be reduced to subtraction and halving.</p> <p>The illustration here given, from Adam Riese's <i>Rechenbuch Vff Linien vnnd Ziphren</i> (Erfurt, 1522, but from the Frankfort edition of 1565 fol. 6, v), shows the reckoning board and a slight explanation of the methods of doubling, with three examples in our common numerals. Although Riese was one of the greatest Rechenmeisters of Germany, his explanations of the process with counters were not so satisfactory as</p>
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Rechenbüchlin



Oben soltu anheben / ligt nun ein dz im spacio / so greiff auff die nechste Linien darthber. Sprich / halb 2 macht 1 / das leg. Darnach greiff herab auff die nechste Linien / ligt dz da / so duplir sie / dz kompt / leg nider / ligt dann aber ein dz in dem spacio / so thut wie ge sagt. Deßgleichen mit den dz auff den linien / so lang biß nichts mehr zu duplirn vorhanden / als folgende Exempel außweisen.

8967	17934
7583	15166
5968	11936

Proba.

Das probir also / halbir die zal / die kommen ist auß dem duplirn / so kompt die erste außgelegt zal wider.

Medirn.

Reyße

Adam Riese, *Rechenbuch Vff Linien vnnd Ziphren*, 1522

From the edition of 1565. Illustrating doubling

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	<p>those of various other writers, as may be inferred from the case shown on page 43.</p> <p>The illustration of halving, here given, is from Johann Albert's <i>Rechenbüchlin Auff der Federn</i> (Nürnberg, 1534, but from the Wittenberg edition of 1561, fol. B, vj, r) and has a much better explanation than that given by Riese in connection with doubling. The problem is to halve the number 3894. Albert begins with units ("grieff auff die vnterste Linien") and takes half of 4, which is 2. The rest of the solution is shown in the facsimile, the result being 1947, as set forth in the right-hand column.</p> <p>In subtracting one number from another, the counters were often set down in two columns with a line between them, after which the subtraction was performed somewhat as we perform it now. A better plan, however, was first to set the larger number down in counters, then to write the smaller number for reference, and finally actually to remove the counters as the subtraction proceeded. Those counters that were left expressed the remainder. A third plan is</p>
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ben 2. Greiff auff die ander/nim 9 halb
hinweg/bleiben 4 vnd ein halbs. Greiff
auff die dritte/nim acht halb hinweg/
bleiben 4. Greiff auff die vierde /nim
3 halb hinweg/ bleibt 1 vnd ein halbs.
Halbir. Ist halbirt.



Also thue mit diesen Exempeln
hierunten / Auch allen andern / so dir
vorkomen.

	3462	—	1731
	2914	—	1457
Leg auff	8760	—	4380
halbir	9408	bleibe	4704
	7952	—	3976
	5314	—	2657

Proba.

Duplir die halbirte zal / Römpe dir
widerumb die zal / welche du zuvor auff
gelegt hast / so hastu recht halbirt.

Multi

Johann Albert, *Rechenbüchlin*, 1534

From the edition of 1561. Illustrating halving

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	<p>the one here shown in the page from Michael Stifel's <i>Deutsche Arithmetica</i> (Nürnberg, 1545, fol. 4, v). The case is the subtraction of 984,392,760 from 9,286,170,534. The larger number is set down by counters in the left-hand column, the smaller number is written at the left of this column, and the remainder appears at the right. Stifel begins with the highest order, changing 92 (hundred millions) in the larger number to 80 + 12. He is then able to take 9 from 12, and his result thus far is 83 (hundred millions), which he represents by counters in the right-hand column. In a similar manner he proceeds with the other orders.</p> <p>In a case like that of $21,346 - 7,999$, it was not unusual to arrange the larger number so that the subtraction could easily be made without any trouble in borrowing. For example, the Dutch arithmetician Gielis vander Hoecke (Antwerp, 1537) places the larger number, 21,346, in the right-hand column as on page 48. He then reduces this to 1 ten thousand + 5 thousand (space) + 5 thousand (line) + 5</p>
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Der Erst theyl

Nu machen 16 M^{er} 1 schöffel/vñ 12 schöffel mache 1 Walter.

Ist die frag/wie vil es alles korn bringe?

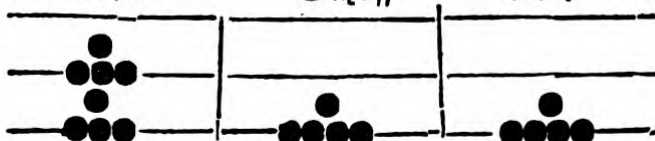
Macht alles 88 Walter/ 9 schöffel/ vnd 9 M^{er}.

Steht dise summa also auff den linien.

Malt:

Schöff:

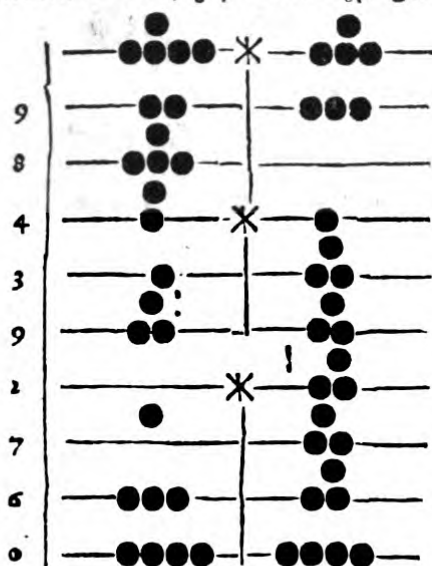
M^{er}:



Von dem Subtrahiren. V.



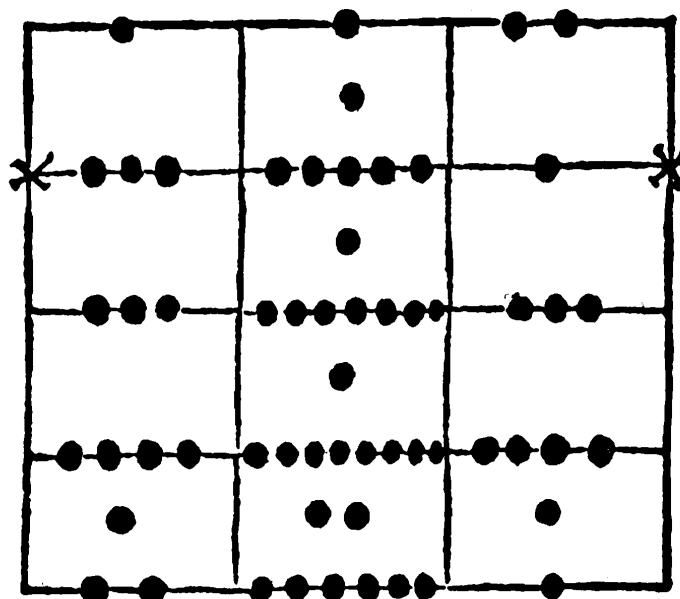
Astu aber ein sum̃ oder zal/da von du etwas wilt subtrahiren oder abziehen/so leg die selbige summen (da von du subtrahiren wilt) auff die linien / vnd die zal oder sum̃/die du daruon subtrahiren wilt/die magstu im siñ behalten/oder magst sie fur dich schreiben mit der freyden/ oder magst sie zur lincken hand der gelegten zal schreiben/wie du sihest am nachfolgenden exempel.



Dise exemplum zeige an das ich von diser zal 9 2 8 6 1 7 0 5 3 4 habe subtrahirt/ dise zal 9 8 4 3 9 2 7 6 0. vñnd sey mir dise zal 8 3 0 1 7 7 7 7 4. vber blyben. So hastu nu oben gehört wie die erste figur einer yeden geschribnen zal/gehört zur ersten linien/vnd die an der figur gehöre zu der andern lini/vnd die dritte zur

Michael Stifel, *Deutsche Arithmetica*, 1545

Illustrating subtraction



Proce der addicien.

Set die somme op die linie en treet daer af dat ge-
tal diemen heeft gheaddeert so dan die rekenen-
ningen alle opstaen so is sulche additie oprecht.

Proce der subtraction.

Addereert word die ghetael welke ghi ghesubtraheert
hebt totte ouergebleuen oft residuo en so dan word co-
met dat ghetael van welken ghi hebt ghesubtraheert so
is sulche subtractione recht.

Wijsho oft deplinget

Deelt een ghetael door dander.

Die eerste regel.

Leggheet die ghetael welke te deelen is op de li-
nie tegen die rechte hand en houd den deplider inden sin-
daer na grijpt metten vinger op de linker side op die
eerste linie de rekenningen met pauberinge der leg-

From the Arithmetic of Gielis vander
Hoecke, 1537

Illustrating subtraction

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hundred (space) + 7 hundred (line) + 5 tens (space) + 8 tens (line) + 10 (space) + 6 (line), which he places in the middle column. He then subtracts 7 thousand from the 1 ten thousand + 5 thousand (space) + 5 thousand (line) and places the counters (1 ten thousand + 3 thousand) in the left-hand column. The rest of the subtraction is performed in a similar manner, the counters at the left showing the result, 13,347.

In general, it was not the custom to devote much space to explaining the operations with the counters, this being left to the teacher. Thus Hudalrich Regius (*Vtriusque arithmetices epitome*, Strasburg, 1536, but from the Freiburg edition of 1550, fol. 97, r) gives only two examples in subtraction, and depends wholly, except for a brief rule, upon the diagrams given on the following page. The first he calls an "Exemplvm de Linea" and the second an "Exemplvm de Spacio," but there is no essential difference between them. In each case, if a simple subtraction is impossible, a counter is removed from the space or line

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EPITOME. 97

Subtrahendus.	Superior.	Relictus.
*	•	• *
•	•	•
• •	• • • •	•
•	•	•
• • •	• •	• • • •
•	•	•
• •	• • • •	• •

1 9 7 9
7 8 7

EXEMPLVM DE SPACIO.

Subtrahendus.	Superior.	Relictus.
*	• •	• *
•	•	•
• •	• •	• • • •
•	•	•
• • •	• • • •	•
•	•	•
• •	• • • •	•

2 7 4 8
7 8 7

1 9 6 1

N

Hudalrich Regius, *Vtrivsque arithmetices
epitome*, 1536

This reproduction is from the 1550 edition. Illustrating subtraction

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above, and its equivalent is placed on the line (five counters) or in the space (two counters) below.

In a case involving the subtraction of denominate numbers, computers often set down the different denominations, each in its proper *Cambien*. They then subtracted by actually taking away the counters as required by the problem, "borrowing" a counter from a line whenever necessary, and repaying the debt by placing two counters in the space below. The solution on page 52 is from *Ein Neues Rechen Büchlein auff Linien vñ Federn* (Julius-friedenstedt, 1590, fol. cij, r), by Eberhard Popping, one of the later German arithmeticians to make use of counter-reckoning. The problem is to subtract 6324 florins, 16 groschen, 7 pfennigs, 1 heller from 9867 florins, 8 groschen, 3 pfennigs, and only the result is shown on the counting table,—this being incorrect in the number of groschens.

For a simple illustration of the work in multiplication the facsimile page from Bathasar Licht (Leipzig, c. 1500), will

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Item / Ein Stadt Jünger hat
 Zerlicher auffkuffte in Fünff Terminen
 auffzuheben / 6474. R / 18. g / 9. s /
 Darauf hat er Vier Termine empfan-
 gen / Ist die Frage / Wieviel man ihme
 zum Fünfften Termine noch zu geben
 schuldig sey :

Facit/

R	g	s	h
1828.	10.	0	1.
fl	12.	g	h
2198	7	2	1
364	0	3	0
1402	9	6	1
681		8	1

Thue ihme also: Summir die
 Vier Termine zusammen/was da kömpt
 nimbs abe von der Heuptsumma / das
 bleibend ist der Fünffte Termin.

E ij Item

Eberhard Popping, *Ein Newes Rechen
 Büchlein auff Linien vñ Federn*, 1590

Illustrating subtraction

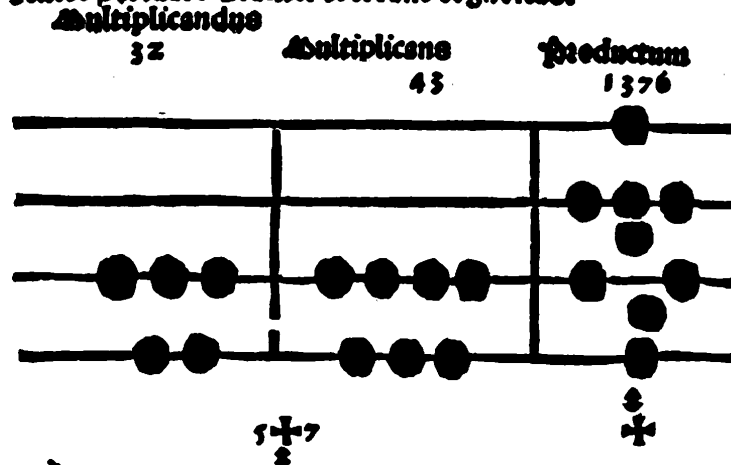
COMPUTING JETONS

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serve the purpose. The book was published without date, but the dedicatory epistle closes with the words "Vale ex nostra academia Lyptzen Anno. 1500," so that the illustration represents the process as it must have been performed in Leipzig at the close of the fifteenth century. The author recommends the learning of the multiplication table up to 4×9 . In cases where it was needed beyond this point, the arithmeticians of that period had a simple and convenient rule for multiplying on the fingers. In the example on page 54 the author first, on a preceding page, says, "Volo multiplicare 32 cum 43. Ita pone." ("I wish to multiply 32 and 43 together. Place the counters thus.") He first places the 32 in the left column as seen in the facsimile. He then proceeds with his explanation substantially as follows: Beginning with the tens, we see that 4 times 3 is 12; write the 1 on the thousands' line (which he does not mark with a cross as the other writers usually did), and the 2 on the hundreds' line; 3 times 3 are 9, and this being 9 tens we place a counter above the

NUMISMATIC NOTES

**Multiplicatio pba nonaris ita tuel. Oportet utrinque nu-
meri (si collegisti ut decet) relictū in semultiplicatū cū pductū
relictū poudare Si aliter te errasse cognoscas.**



**Oposite speciei proba in prima prorogat speciem. Quia de
nisiio probat multiplicatioz. mediatio duplicationem. Subtra-
ctio additionem et econtra.**

A divisione duo sunt ob-

**servanda et Multiplicatio et Subtractio. Constat
mitur aut divisione in duas Reglas. Prima a super-
rioribz descendere incipias ubi q̄cientisqz ultima**

**divisionis tabule relictū via Multiplicatio in proiectilibz digi-
to subiectis haberi potest. Totiens subtractionis more a li-
nea digito tacta illud pductū detrahatur. hinc digitū trāspone
prope sequentē lineā. q̄cientē iterū in sequentē divisionis figū
rā multiplicando qd̄ productū lineę q̄scientis digiti aufer.**

**Nunc ita descendere licebit semper. Nisi p̄ma divisionis q̄scere
inberet. demū ubi desinisti. sup̄ hāc lineā in cōbio oppositi late-
ris ponas nūerus q̄tiens. Et in reliquis iacentibz proiectilibz
taliter divisine semper procedere oportet donec ad infimā li-
neā puenit fuerit. Est et in divisione cauendū. ne talis nume-
r⁹ q̄tiens inueniat. qualē aliq̄ linearū sequēs passura nō esset.**

**Secunda Regla Si nūer⁹ dividend⁹ divisore est minor. di-
visoris medietas (si adest) a dividendo auferatur. et sube-
neam digito tactā. in spacio vnus proiectilis ponatur. Itē to-
ta divisione facta si aliquid residui minus divisore relinquit
relictū appellat qd̄ cum divisore fractionē constituere intelli-
gitur. Exemplum volo dividere 1376 per 43**

Bi

Balthasar Licht, Arithmetic, c. 1500

Illustrating multiplication and the check of "casting
out nines"

COMPUTING JETONS

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tens' line and 4 counters on the line; 2 times 4 are 8, and this being 8 tens we place a counter above the tens' line and 3 counters on the line. He now readjusts the counters thus placed, carrying the 2 fifties to the hundreds' line, and 5 tens to the fifty space. He finally multiplies 2 by 3 and, for the product, places 1 in the fives' space and one on the units' line. The work then appears as shown in the facsimile. The two crosses below the units' line indicate the check by "casting out nines." The rest of the page is given to the first steps in division.

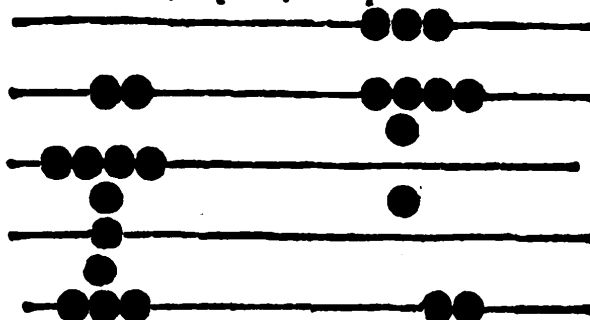
Another example in multiplication, from the Latin work of Joannes Noviomagus (*De Numeris Libri II*, Paris, 1539, but from the Deventer edition of 1551, fol. Eij, r), shows the operation of finding 14 times 2468 by the use of the counters. The author begins with the lowest order and reduces as he proceeds, the result being shown in the right-hand column.

The operation of division was always a difficult one before the Hindu-Arabic numerals became generally known and

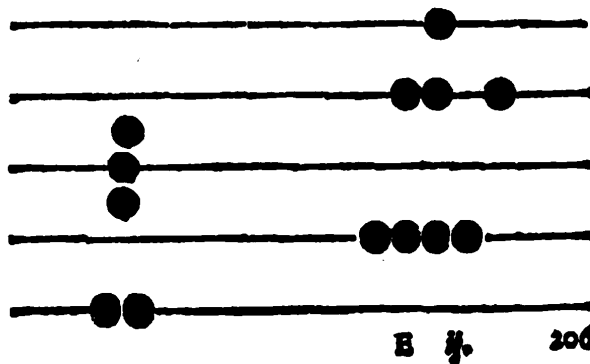
NUMISMATIC NOTES

LIBER I.

2468 per 14 multiplicata.



Obserua ut nummo posito in spacio digitus
 collocetur in linea, cui spaciū est subiectum, ut sub
 lato nummo ex spacio, ad dextrum ponatur diuiden
 tis numeri dimidium, ut 652 per 20. hac forma ut
 sequitur.



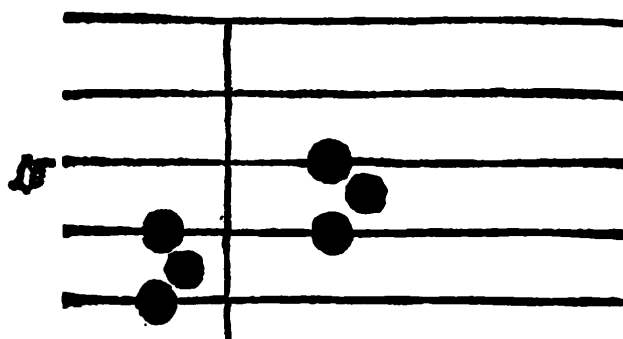
Joannes Noviomagus, *De Numeris Libri*
 II, 1539

Illustrating multiplication

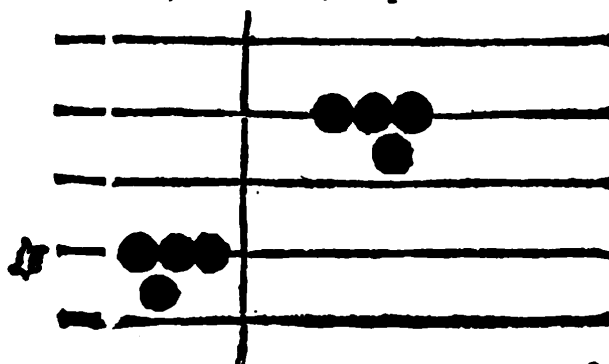
ARITHMETICA.

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fito digito secunde lineæ, nummus in summa positus
denarium efficit qui auferendus ponendusq; iuxta di-
gitū. Deinde proximus quinarium ualens, uel dimidium
denarij transferendus ad spaciū leuam sub digito.
Tertius simili ratione transposito uel ablato digito,
ponendus in infima lineæ.



Diuisio numeri 3500 per 100.



Diuisio

Joachim Sterck van Ringelbergh,
Lucubrations, 1541

Illustrating two simple cases of division

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	<p>used in Europe, say in the fifteenth century. It could be performed with the Greek numerals, or even with those used by the Egyptians and other early peoples, but it was always looked upon as a process to be avoided. The illustration on page 57 is from a work by Joachim Sterck van Ringelbergh (<i>Opera</i>, Leyden, 1531, but this illustration from the Basel edition of his <i>Lucubrations</i>, 1541, p. 415) and shows the operation in its simplest form. Two problems are given on the page, the first being the division of 160 by 10, in which the counters in the right-hand column are merely lowered one line to form the result in the left-hand column; and the second being the division of 3500 by 100, which is performed in a similar fashion. The most difficult case that Ringelbergh considers is that of 600 divided by 24, of which no explanation is given, all of which shows how difficult the process was considered even in his time.</p> <p>The illustration from Recorde's <i>Ground of Artes</i> (c. 1542, but from the 1596 edition) gives an idea of the method of beginning a</p>
	NUMISMATIC NOTES

Diuision.



First set downe the diuisor, for feare of forgetting, and then set the number that shall be diuided, at the right side, so farre from the diuisor, that the quotient may be set betwene them:

as for example.

If 225 sheepe cost 45 £, what did enery sheepe cost? To know this, I should diuide the whole summe, that is 45 £ by 225, but that cannot be: therefore must I first reduce that 45 £ into a lesser denomination, as into shillings, then I multiplie 45 by 20, and it is 900: that sum shall I diuide by the number of sheepe, which is 225, these two numbers therefore I set thus.



Then begin I at the highest line of the diuident, and seeke how often I may haue the diuisor therein, and that may I doe foure times: then say I foure times 2 are 8, which if I take from 9, there resteth but 1, thus.

And

Robert Recorde, *Ground of Artes*, c. 1542

This reproduction is from the 1596 edition. Illustrating division

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	<p>practical problem in division. The problem requires the division of £45 by 225, and the facsimile shows the necessity for first reducing the £45 to 900 shillings. Recorde then takes 4×200 from 900 and has 100 left, after which he shows that the remaining 25 of the 225 is contained in this remainder four times.</p> <p>There arose in early times, possibly in India but spreading rapidly to the north and west, a commercial rule which went by the name of Rule of Three. Its nature may be inferred from a single problem taken, with slight variation in terms, from <i>Eyn new künstlich behend vnd gewiss Rechenbüchlin</i>, written by Henricus Grammateus, or Heinrich Schreiber (Vienna, 1518, but from the Frankfort edition of 1535, fol. B, vij, v): "If 4 dreilings of wine cost 90 florins, 3 schillings, 18 pfennigs, how much will 7 dreilings cost?" Here three terms are given, and the rule was that the fourth could be found by multiplying the second and third together and dividing by the first. How this was done in numerals is shown in the upper part of the facsimile</p>
	NUMISMATIC NOTES

$\begin{array}{r} 2 \\ 6 \\ 4 \end{array} \begin{array}{r} 2 \\ 7 \\ 4 \end{array} \begin{array}{r} 2 \\ 7 \\ 4 \end{array}) 157 \text{ fl. } 16 \text{ β auff ein oz.}$

$\begin{array}{r} 2 \\ 4 \end{array} \begin{array}{r} 7 \\ 4 \end{array} (9 \text{ β/} 30 \text{ dz auff ein oz.}$

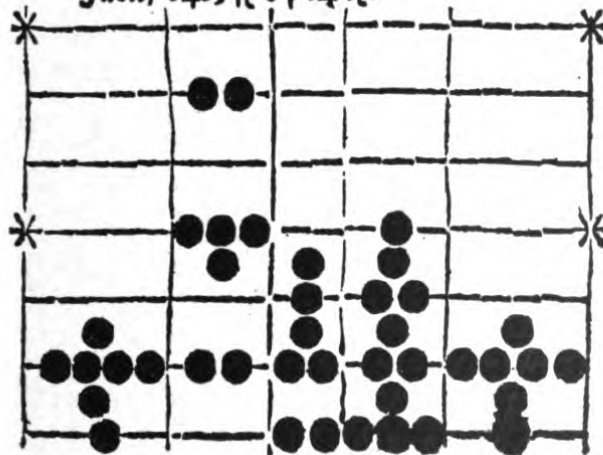
$\begin{array}{r} 2 \\ 4 \end{array} \begin{array}{r} 7 \\ 4 \end{array} (39 \text{ dz.}$

$\text{facit } 158 \text{ fl. } 2 \text{ β/} 9 \text{ dz.}$

Wann du aber solche rechnung oder der glei-
 chen wilt machen vff der linien/so leg die letzte
 zal vff die linien gegen der lincken hand/vnnd
 multiplicir durch alle münz in sunderheit/vnd
 leg ein igliche münz in jr feld/vñ teyl durch die
 erste zal in aller gestalt wie in obern exempelen
 ist geschehen/als dann die würt gesehen.

$24 \text{ lb } 2120 \text{ fl } 7 \text{ β } 18 \text{ dz } 1 \text{ heller/ } 96 \text{ lb}$

$\text{facit/ } 8493 \text{ fl } 6 \text{ β } 14 \text{ dz.}$



Henricus Grammateus, or Heinrich
 Schreiber, *Eyn new künstlich behend*
vnd gewiss Rechenbüchlin, 1518

This reproduction is from the 1535 edition. Illus-
 trating the Rule of Three

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	<p>on page 61, the lower part showing how a similar problem could be solved by the aid of counters.</p> <p>A much more interesting illustration of the use of the counters in the Rule of Three is the one here given from an anonymous manuscript written at Salisbury, evidently in the Cathedral School, in 1533. The interest lies chiefly in the fact that manuscripts on counter reckoning, written in England, are very rare, and that this one is a particularly good piece of work. The first part of this manuscript relates to the <i>computus</i>, that is, to the computations of the calendar,—<i>Declaratio Calendarii et Almanach huius Ciste</i>. The second part is entitled <i>Ars supputandi cum Denariis</i>. The whole is written on vellum and is one of the most interesting of the sixteenth-century manuscripts in Mr. Plimpton's library. The problem states that two things cost £6, from which it requires the cost of twelve things. The counters in the three columns at the left represent 2, 6, and 12. The answer, xxxvi, is written, under "Quartus incognitus," in the fourth column.</p>
	NUMISMATIC NOTES

numerū per secundū multiplica, supple xii.
 per. vi. et pueniunt ad. Lxxii. quo p primū
 numerū diuide. supple per duo, et quart⁹
 numerus sup. xxxvi. prius incognitus, pre
 tiū duodecim lapidum est ostendens. Et
 his omnibus finitis, secundus numerus et
 quartus, semp de eadem re tractant.

		*	
Primus nu.	Secundus nu.	Tertius nume.	Quartus incognitus.
Res empta.	Pretium rei.	Questio.	
			xxxvi.
duo lapides.	Pro xi. lib.	quatuor xii. constabunt.	

From an Anonymous Manuscript of 1533

Written at Salisbury England. It shows the compu-
 tation by jetons in solving a problem in the Rule of
 Three

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	<p data-bbox="716 401 1192 432" style="text-align: center;">HISTORY OF MINTED JETONS</p> <p data-bbox="607 447 1300 1444">I have thus far spoken of the rise of the jeton in ancient times and of its significance and use in numerical computation. It remains to say a few words concerning those minted pieces which have come down to us from the Middle Ages and which constitute the chief point of contact with the work of the numismatist. This part of the general topic has been so thoroughly treated by Professor Barnard, however, that there remains but little to be done except to call attention once more to his great contribution to the subject. The few illustrations which I give are from specimens in my own collection, and are included for the purpose of completing this elementary presentation of the subject rather than on account of any rarity of the pieces themselves. They represent such ordinary counters as were prepared in Germany, chiefly at Nürnberg, for the use of computers in various parts of Europe.</p> <p data-bbox="607 1455 1300 1583">Naturally the greatest interest in medieval counters lies in the Italian pieces, Italy having been the source from which were</p>
	NUMISMATIC NOTES

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<p>derived the methods of computation used in the northern European countries. As already stated, the use of the abacus was abandoned there much earlier than it was north of the Alps. The commerce which Venice, Pisa, and Genoa had with the East tended to bring the Hindu-Arabic numerals into practical use in Italy long before they became familiar in the less accessible countries of France, England, Germany, and the Netherlands. For their early computations the merchants may have used the Roman counters,—usually disks of bone or of baked clay; they may have found the grooved abacus more convenient; or they may have used the digital computation which was international during a long period and which is still found in Russia, Poland, and certain of the Balkan states.</p> <p>About the year 1200, however, the Lombard bankers and merchants began to use a minted type of counter. From that time on until about the close of the fourteenth century such counters seem to have been used in Italy, often in a half-</p>	
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	<p>hearted way, but in the fifteenth century even this use died out. The Treviso arithmetic of 1478, the first work on computation to appear from the press, makes no mention of counters, and no other Italian textbook on the subject, printed in that century, discusses the matter. Because of the fact that the mercantile and banking class in Italy abandoned the use of counters so long before the rest of Europe, most of the extant specimens are confined to the fourteenth and fifteenth centuries. Such pieces are very rare, and the only worthy description that we have of them is a recent one by Professor Barnard ("Italian Jettons," <i>Numismatic Chronicle</i>, vol. xx (4), for 1920).</p> <p>The counter of numismatic nature first appeared in France about the same time that it appeared in Italy, that is, early in the thirteenth century. The earliest identified piece mentioned by Professor Barnard is one that seems to have belonged to the household of Blanche of Castile (1200-1252), queen of Louis VIII. Since the use of these pieces is explained by Ian Tren-</p>
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<p>chant as late, at least, as the 1578 edition of his <i>Arithmetique</i>, we may conclude that numismatic jetons were employed in France for ordinary computation for a period of about four hundred years (1200-1600).</p> <p>In the sixteenth and seventeenth centuries the favored land of the counter (<i>Rechenpfennig</i>) was Germany. Although her merchants knew the Hindu-Arabic numerals and could operate with them, her Rechenmeisters made common use of the abacus long after most other countries of Western Europe had virtually abandoned it. Her most popular arithmetics of the sixteenth century coupled reckoning "auff Linien" with that by the "Feder," and apparently her merchant apprentices favored the ancient method. The names of Hans Schultes, the Krauwinckels, the Laufers (Lauffers), and others appear on thousands of extant jetons of Nürnberg manufacture, and these pieces were sent to all parts of Europe, being manufactured for France, England, the Netherlands, Austria, and the smaller states, as well as</p>	
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	<p>for those cities which now belong to modern Germany. The illustrations on Plates I-IV are selected from the Nürnberg products.</p> <p>In the Low Countries, jetons were used as early as the fourteenth century, but the computing pieces now commonly seen in museums and the cabinets of numismatists are of the fifteenth and sixteenth centuries. The medallic jetons of the seventeenth century could scarcely have been generally used for computing purposes, for the arithmetics of these countries never paid much attention to the subject, and those of the seventeenth century rarely mentioned it.</p> <p>Spain gave but little attention to the use of the counters after the invention of printing. Such jetons as she struck were probably, in most cases, for other purposes than computing. A few pieces were struck in Portugal in the sixteenth century, and were apparently used for computation.</p> <p>English jetons of the fourteenth century are to be seen in numismatic collections, but beginning about the middle of the century the need was commonly met by</p>
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<p>pieces made abroad,—at first by Flemish craftsmen, but later by those of Nürnberg. As already stated, counter reckoning went out of use about the close of the sixteenth century, although jetons for gaming purposes were sent over from Germany until well into the eighteenth century.</p> <p>SUMMARY</p> <p>The points which I have endeavored to make may be summarized briefly as follows:</p> <ol style="list-style-type: none"> 1. The ancient notations were so inconvenient as to render inevitable the use of mechanical aids. 2. These aids were of various kinds, and go back probably to prehistoric times. 3. The chief interest for mathematicians lies in the field of computation and concerns the various forms of the line abacus, the methods employed in calculation, the steps that slowly led to the modern calculating machine, and the prospects of the development of simpler and less expensive devices that will render nearly all computation mechanical. 	
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	<p>4. The chief interest for the historian lies in a study of the human needs which the abacus, in its various forms, tended to satisfy, and also in the possibility that ingenuity will, as stated above, devise a more efficient machine at a low cost so that human energy may be still further conserved through mechanical calculation.</p> <p>5. The chief interest for the numismatist lies not so much in the use of the jeton as in its history as a minted product. This product began to appear in the thirteenth century and ceased to meet any reasonable human need in the eighteenth. For the real lover of numismatical science, however, there is always a deep interest in the human story involved in the pieces that he examines, and it is some phases of this human story that I have endeavored to set forth in this brief monograph.</p>
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COMPUTING JETONS

PLATE I



Early Nürnberg Jetons

c. 1450-1500



A Dutch Jeton of 1562

COMPUTING JETONS

PLATE II



The Rechenmeister Type of Jetons

Nürnberg, c. 1500-1553

COMPUTING JETONS

PLATE III



Nürnberg Jeton by Hans Schultes

c. 1550-1574



Nürnberg Jetons by Hans Krauwinckel

c. 1580-1610

COMPUTING JETONS

PLATE IV



Nürnberg Jeton by Wolf Lauffer

c. 1618–1660. Intended for use in France



Nürnberg Jetons by Conrad Lauffer

Intended for use in England in the time of Charles II,
for gaming purposes

PUBLICATIONS

Edward T. Newell. The Alexandrine Coinage of Sinope. 1919. 11 pages. 2 plates. \$2.50.

Edward T. Newell. Myriandros—Alexandria Kat'isson. 1920. 42 pages. 2 plates. \$3.00.

Agnes Baldwin. The Electrum and Silver Coins of Chios. 1915. 60 pages. 7 plates. \$2.00.

Albert R. Frey. Dictionary of Numismatic Names. 1917. 311 pages. \$5.00.

Henry C. Miller and Hillyer Ryder. The State Coinages of New England. (Conn.—Vermont—Mass.). 7 plates. \$3.00.

Moritz Wormser. Coins and Medals of Transylvania. 9 plates. \$3.00.

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6 plates. 50c.
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25 pages. 2 plates. 50c.
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- 10 Edward T. Newell. The First Seleucid Coinage
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NUMISMATIC NOTES
AND MONOGRAPHS

No. 10



THE FIRST SELEUCID COINAGE
OF TYRE

By EDWARD T. NEWELL

THE AMERICAN NUMISMATIC SOCIETY
BROADWAY AT 156TH STREET
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The American Numismatic Society. Catalogue of the International Exhibition of Contemporary Medals. March, 1910. New and revised edition. New York. 1911. xxxvi, 412 pages, 512 illustrations. \$10.00.

The American Numismatic Society. Exhibition of United States and Colonial Coins. 1914. vii, 134 pages, 40 plates. \$1.00.

NUMISMATIC NOTES AND MONOGRAPHS

NUMISMATIC NOTES AND MONOGRAPHS
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THE FIRST SELEUCID COINAGE OF TYRE

BY

EDWARD T. NEWELL



THE AMERICAN NUMISMATIC SOCIETY
BROADWAY AT 156TH STREET
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THE FIRST SELEUCID COINAGE
OF TYRE

BY EDWARD T. NEWELL

In the city of Tyre was located one of the most active mints of the Seleucid kings. Their well known tetradrachms of Phœnician weight, bearing the eagle type associated with the usual symbol of the Tyrian mint (the club combined with the letters TYP), are among the commonest coins of the entire Seleucid series. It is, however, a matter of considerable surprise when we contemplate the fact that the striking of these particular coins only commenced with the reign of Alexander I Bala (150-145 B.C.), although the flourishing city of Tyre had already been subject to the Syrian monarchs for over fifty years.

Under the previous dominion of the Ptolemaic kings of Egypt the city had constituted one of their principal mints—

2.	S E L E U C I D C O I N A G E
	<p>indeed the most prolific and continuously active one along the entire Phœnician coast.¹ It is difficult to believe, therefore, that Tyre really ceased for a time to coin silver, when in 201 B.C. Antiochus III entered its gates and the city became the centre of his Phœnician dominions. The commercial importance of Tyre, its great strategic value, and its past numismatic history all point to the necessary conclusion that its silver coinage could hardly have stopped when it passed from Lagid to Seleucid rule.</p> <p>It is true that a few copper coins have already been attributed to Tyre for the period preceding the reign of Alexander Bala. In addition, one tetradrachm bearing the portrait of Antiochus III has also been assigned to this mint by Dr. J. Rouvier (No. 1824 in his <i>Numismatique des Villes de la Phénicie</i>, <i>Jour. Int. Num.</i>, Vol. 6, 1904). This latter piece, however, because of its style and fabric, probably never emanated from the Tyrian mint.² We are, therefore, reduced to the above mentioned rather paltry copper coinage as the sole</p>
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<p>representatives for over fifty years of the wealthy city of Tyre and a great Seleucid fortress.</p> <p>Induced by this somewhat surprising state of affairs to institute a careful search through the various catalogues of important public collections and also such private collections as were accessible to him, the writer was soon rewarded by finding a comparatively large and remarkably homogeneous group of tetradrachms and drachms whose attribution to Tyre now appears certain. With these the disturbing and, in fact, impossible gap in the Tyrian silver coinage, which extended from the capture of the city by Antiochus III in 201 B.C. to the inauguration of the well known series of "eagle" tetradrachms of Phoenician weight in 150 B.C. (the first year of Alexander I's reign), is now completely and apparently satisfactorily filled. As the following catalogue shows, every Seleucid sovereign who reigned during the fifty years in question is represented by an adequate silver coinage, in addition to a plentiful series of bronze coins.</p>	
A N D M O N O G R A P H S	

4	S E L E U C I D C O I N A G E
	<p>The writer is here desirous of expressing his deep sense of gratitude to the Rev. Edgar Rogers for his great kindness in allowing him to publish certain rare and apparently unpublished varieties (Nos. 51 and 53). The writer is also very grateful to Dr. Rogers, M. Jameson, and the authorities of the British Museum and Paris collections for their kindness and trouble in sending him casts of certain important pieces needed for this article.</p> <p>ANTIOCHUS III, 223-187 B.C. SERIES I, CIRCA 201-196 B.C.</p> <p>I TETRADRACHM.</p> <p><i>Obv.</i> Head to right adorned with diadem with fluttering ends. The features of Antiochus III are rather fleshy, his nose is comparatively short.</p> <p><i>Rev.</i> ΒΑΣΙΛΕΥΣ on right. ANTIOXOY on left. Apollo, completely naked, seated to left on omphalos. He holds arrow in outstretched right hand and rests left on a bow of the "composit" type. On r., outside inscription, Α. On l., outside inscription, Α.</p> <p>Newell Coll. Plate I.</p>
	N U M I S M A T I C N O T E S

T Y R E	5
<p>2 TETRADRACHM. <i>Obv.</i> From the same die as the preceding coin. <i>Rev.</i> Similar, but the shaft of Apollo's bow forms a simple curve. Newell Coll. Plate I. Another in commerce, gr. 17.23.</p> <p>3 CHALKOUS. <i>Obv.</i> Similar head to right, at times in a circle of dots. <i>Rev.</i> ΒΑΣΙΛΕΩΣ above. ANTIOXOY below. Prow of galley, adorned with dolphin, to l., in circle of dots. Newell Coll. Two specimens, gr. 6.65 and 5.36. Plate I.</p> <p>4 CHALKOUS. <i>Obv.</i> Similar. <i>Rev.</i> Similar, but above prow is to be seen the date ΠΙΕ (=198-197 B.C.). Paris, No. 450 (gr. 4.40) Pl. xi, 5; No. 451 gr. 4.90.</p> <p>5 DILÉPTON. <i>Obv.</i> Similar. <i>Rev.</i> ΒΑΣΙΛΕΩΣ on right. ANTIOXOY on left. Palm tree, the whole surrounded by a circle of dots. Newell Coll. gr. 2.76. Plate I.</p>	
A N D M O N O G R A P H S	

6	S E L E U C I D C O I N A G E
	<p>While conforming in a general way to the types and style of the tetradrachms which the writer has elsewhere³ shown must be assigned to Antioch, our two coins, Nos. 1 and 2, nevertheless differ markedly in many minor details. This fact at once suggests the possibility that we have here to do with the issues of another mint. On the other hand, the technique of the die-cutting and the fabric of the coins themselves point to a mint whose location could not have been at any very great distance from Antioch, that is to say, as far away as Asia Minor or Babylonia. We must, therefore, look nearer home—perhaps in Cilicia, Syria, or along the Phoenician coast.</p> <p>Again the features of Antiochus on these coins show that he is no longer a young man. The coins must certainly be later than Nos. 7 to 12 on Plate I of the writer's "The Seleucid Mint of Antioch," where the features are still very youthful. On the other hand, our head does not exhibit the sunken cheeks and sharper profile of Nos. 25 to 30 on Plate II of the same work.</p>
	N U M I S M A T I C N O T E S

T Y R E	7
<p>In other words, our coins evidently fall somewhere between these two groups and so are to be considered as nearly contemporaneous with Series II of the Antiochene mint which is assigned to about 206-200 B.C. A comparison of the portraiture confirms this in a general way.</p> <p>A glance at our Plate I shows unmistakably the close connection that must exist between the bronze coins (Nos. 3 and 5) there displayed and our two tetradrachms. There is a striking similarity between the portraits which all these coins bear, and a still greater similarity in the style of their die-cutting. So evident is this, that the most conservative of numismatists will probably admit the strong chance that all these coins were perhaps actually issued from one and the same mint. Now the technique displayed by the bronze coins, the flans upon which they were struck and, above all, their types are characteristically, even certainly, Phoenician. Hence, at least, the tentative assignment of Nos. 1-5 to some important Phoenician city can hardly be seriously</p>	
A N D M O N O G R A P H S	

8	S E L E U C I D C O I N A G E
	<p>disputed. Furthermore, it should be pointed out that the conclusions arrived at above as to the approximate date of their first appearance coincides with the historical fact that Antiochus III finally secured possession of the Phœnician coast in the spring of 201 B.C. The actual date borne by No. 4 is probably the terminus of this particular issue. The definite assignment to Tyre, as proposed in this article, of our tetradrachms rests largely upon the attribution of Series II and III.</p> <p>The bronze coins described above have been given, following M. Babelon and Dr. J. Rouvier, the convenient terms of Chalkous and Dilepton to facilitate a quick distinction between the two denominations used. To determine upon what really are the denominations found in Greek copper coins is a knotty problem, and requires a longer period of research and study before it is placed upon a definite and acceptable basis. The terms are here used only for convenience sake and in deference to M. Babelon's well-known authority.⁴</p>
	N U M I S M A T I C N O T E S

T Y R E	9
<p style="text-align: center;">SERIES II, CIRCA 196 B.C.</p> <p>6 TETRADRACHM. <i>Obv.</i> Diademed head as on preceding tetradrachms but with longer nose and features less fleshy. The diadem ends henceforth hang down straight instead of fluttering. <i>Rev.</i> Inscription and type as on Nos. 1 and 2. Apollo is entirely nude as before, but the omphalos is here draped with his himation. His bow is again of the simple type. On l. outside inscription, Α. On r., outside inscription, Α.</p> <p>Paris, No. 336, Plate II; Athens, <i>Jour. Int. Num.</i> Vol. VI, 1903, Pl. vii, 2.</p> <p>7 TETRADRACHM. <i>Obv.</i> From the same obverse die as was used for the preceding coins. <i>Rev.</i> Similar. On l., outside inscription, Α. On r., outside inscription, Α.</p> <p>Newell Coll. Plate II.</p> <p>8 TETRADRACHM. <i>Obv.</i> Similar but of higher relief and better style. For the first time a circle of dots surrounds the head.</p>	
A N D M O N O G R A P H S	

10	S E L E U C I D C O I N A G E
	<p><i>Rev.</i> Similar, but the omphalos (as on Nos. 1 and 2), is no longer draped. The bow is of simple style. On l., outside inscription, Α. On r., outside inscription, Α. In exergue, Bull rushing to l.</p> <p>Paris, No. 337. Plate II.</p> <p>Nos. 6 and 7 of this series are united not only by the monogram Α found on both, but especially by the fact that their obverses were struck from the same die. No. 6 bears also the monogram Α which we have seen occurred on our two first tetradrachms Nos. 1 and 2. Therefore, in spite of the minor differences in style and details of design between the two groups, it is probable that they were all struck in one and the same mint. This inference is definitely proved by No. 8 which in style and details of the obverse design is closest to Nos. 6 and 7, but in the style of its reverse is closest to Nos. 1 and 2. Furthermore, it bears the same two monograms Α and Α found on the tetradrachms of Series I, and so must certainly have been struck at their mint. The infuriated bull which</p>
	N U M I S M A T I C N O T E S

T Y R E	11
<p>is to be seen in the exergue of this coin is probably only a magistrate's symbol.</p> <p style="text-align: center;">SERIES III, CIRCA 196-188 B.C.</p> <p>9 TETRADRACHM.</p> <p><i>Obv.</i> Diademed head of Antiochus III to r. surrounded by a circle of dots. The portrait on this and the following coins is somewhat idealized, the features are thinner and sharper, the nose long and pointed. The diadem ends hang down stiffly. The breaks which appear later on this die do not show here.</p> <p><i>Rev.</i> On r. ΒΑΣΙΛΕΩΣ; on l., ANTI- OXOY. Apollo, naked but for his right thigh which is draped, is seated to l. on omphalos, the top of which is also draped. In style and details, this reverse approaches closest to those of Nos. 6 and 7. On l., outside inscription, ΝΚ; on r., outside inscription, ΠΡ.</p> <p>Paris, No. 291 (erroneously attributed to Antiochus Hierax) Pl. viii, fig. 6; here Plate III: A much finer specimen from the same obverse and reverse dies is shown on Pl. xxii, No. 581, Hirsch Sale, XXXII. 1912.</p> <p>10 TETRADRACHM.</p> <p><i>Obv.</i> From the same obverse die. Die</p>	
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12	S E L E U C I D C O I N A G E
	<p>breaks are here commencing to show at the back of the head.</p> <p><i>Rev.</i> As above, but only Apollo's right thigh is draped. On l., outside inscription, ΝΚ. On r., outside inscription, Ξ. In exergue, <i>Bow in Quiver.</i></p> <p>Pozzi Sale, Apr. 4, 1921, Pl. lxxxvi, No. 2948, Plate III.</p> <p>11 TETRADRACHM.</p> <p><i>Obv.</i> From the same die as the preceding, but with the die breaks still more evident.</p> <p><i>Rev.</i> Similar to preceding, but with Apollo entirely nude. On l., outside inscription, Α, and Lighted Torch. On r., outside inscription, ΝΚ. In exergue, <i>Club.</i></p> <p>London, No. 7, Plate III; Newell Coll.; Paris, No. 290 (erroneously attributed to Antiochus Hierax); Pozzi Sale, Apr. 4, 1921, Pl. lxxxvi, No. 2949.</p> <p>12 TETRADRACHM.</p> <p><i>Obv.</i> From the same obverse die as was used for the preceding coin.</p> <p><i>Rev.</i> Similar. On l., outside inscription, Α. On r., outside inscription, ΝΚ. Newell Coll. Plate IV. A similar coin, but with the obverse from another die, was sold by Mme. Serrure in her sale of Nov. 18, 1911, No. 76, Pl. iii.</p>
	N U M I S M A T I C N O T E S

T Y R E	13
<p>13 DRACHM. <i>Obv.</i> Diademed head similar to preceding. <i>Rev.</i> Similar type and inscription. On l., outside inscription, A. On r., outside inscription, Nκ. Newell Coll. Plate V; Pozzi Sale, Apr. 4, 1921, Pl. lxxxvi, No. 2956.</p> <p>14 TETRADRACHM. <i>Obv.</i> From the same die as Nos. 9-12. <i>Rev.</i> Similar to preceding. On left, outside inscription, A. On r., outside inscription, Nκ. In exergue, <i>Club</i>. Rev. Edgar Rogers. Plate IV.</p> <p>15 TETRADRACHM. <i>Obv.</i> From the same die as the preceding. This die is now showing very bad breaks and dimmed outlines due to long continued use. <i>Rev.</i> Similar to preceding. On l., outside inscription, A above <i>Club</i>. On r., outside inscription, Nκ. Newell Coll. Plate IV; another in commerce.</p> <p>16 CHALKOUS. <i>Obv.</i> Diademed head with sharp features as on preceding coins. Circle of dots around.</p>	
A N D M O N O G R A P H S	

14	S E L E U C I D C O I N A G E
	<p><i>Rev.</i> ΒΑΣΙΛΕΩΣ above. ANTIOXOY below. Stern of galley (not prow as described by M. Babelon). In field the date ΠΙΖ (=196-195 B.C.) Paris, No. 452. gr. 7.75. Pl. xi, 6.</p> <p>17 CHALKOUS. <i>Obv.</i> Similar. <i>Rev.</i> Similar but date is ΠΙΘ (=194-193 B.C.). Newell Coll. gr. 7.20. Plate V.</p> <p>18 CHALKOUS. <i>Obv.</i> Similar. <i>Rev.</i> Similar but date is ΠΚ (=193-192 B.C.). Newell Coll. gr. 9.32.</p> <p>19 CHALKOUS. <i>Obv.</i> Similar. <i>Rev.</i> Similar but date is ΠΚΔ (=189-188 B.C.). London, No. 33.</p> <p>20 DILEPTON. <i>Obv.</i> Similar, features thinner and sharper than on No. 5. <i>Rev.</i> ΒΑΣΙΛΕΩΣ on r. ANTIOXOY on l. Palm tree. The whole in circle of dots.</p>
	N U M I S M A T I C N O T E S

T Y R E	15
<p>Newell Coll. 4 specimens, gr. 3.27, 2.35, 2.24, 2.05 Plate V; Paris, Nos. 577-578, gr. 2.00 and 3.15 (erroneously assigned to Antiochus IV); Dr. Rouvier, No. 1823; London, No. 48, Pl. ix, 8.</p> <p>We need not here delay over the attribution of the bronze coins Nos. 16-20 to Tyre, an attribution that is certain and recognized by all recent authorities. The dates PIZ to PKΔ which appear on the larger of the two denominations show their issue to have taken place between the years 196 and 189 B.C. The small bronze pieces, Nos. 5 and 20, with the type of the palm tree, are the beginning of a long line of similar pieces whose attribution to Tyre is certain and has so been recognized by Dr. J. Rouvier as well as by M. Babelon.</p> <p>Nos. 9, 10, 11, 12, 14 and 15, form a remarkably homogeneous group. All the known specimens, with but a single exception (an example of No. 12) are struck from one and the same obverse die. A glance at these coins, as reproduced on Plates III and IV, shows clearly the advancing wear, breaks, and general deterioration of the particular die in question, due to its long continued service. Especially</p>	
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16	S E L E U C I D C O I N A G E
	<p>to be noted is the fact that this group of coins throughout displays a monogram already used for the issues of Series I and II, namely A, thus conclusively proving that these coins must all be the issues of a single mint. Finally, the tetradrachms of Series III are important as now, for the first time in Seleucid numismatics, appears the Club—the customary attribute of Tyrian Heracles and the usual symbol of the mint of Tyre. The two symbols, Lighted Torch and Quiver, occurring on our coins only intermittently, are evidently but the symbols of magistrates responsible for the coinage and so, unlike the Club, do not occur again on later issues.</p> <p style="text-align: center;">SERIES IV, CIRCA 188-187 B.C.</p> <p>21 TETRADRACHM.</p> <p><i>Obv.</i> Diademed head of Antiochus III to r.</p> <p><i>Rev.</i> ΒΑΣΙΛΕΩΣ on r. ANTIOXOY on l. Apollo seated to l. on omphalos, holding arrow in right hand and resting left on bow. On l., outside inscription ΣΑ and <i>Club</i>. On r., outside inscription, NK.</p> <p>Coll. of Dr. E. P. Robinson. Plate V.</p>
	N U M I S M A T I C N O T E S

T Y R E	17
<p>The single known tetradrachm of Series IV was probably struck but a short time previous to the death of Antiochus III. This follows from the fact that not only the symbol but also both monograms are found on the immediately succeeding issue of Seleucus IV. Thus is finally crystallized the general type and character of the silver issues of Seleucid Tyre until the time when the entire system was changed by Alexander I Bala.</p> <p>The style of No. 21 is identical with that of the immediately preceding tetradrachms of Series III. Like them, it bears the mint symbol <i>Club</i>, and the monogram NK which has been found to occur on Nos. 9 to 15 inclusive. Further proof of the identity of the mint is hardly necessary. A new magistrate, signing his initials ΣA immediately above the club, appears now for the first time, but we will have further occasion to record his signature on the succeeding issues of Seleucus IV and Antiochus IV.</p>	
A N D M O N O G R A P H S	

18	S E L E U C I D C O I N A G E
	<p style="text-align: center;">SELEUCUS IV, 187-175 B.C.</p> <p>22 TETRADRACHM. <i>Obv.</i> Diademed head of Seleucus IV to r. Circle of dots. <i>Rev.</i> ΒΑΣΙΛΕΩΣ on r. ΣΕΛΕΥΚΟΥ on l. Apollo seated to r. as on previous issues, holding arrow in outstretched right hand and resting left on bow. On l., outside inscription, <i>Club</i> and ΣΑ. On r., outside inscription, ΝΚ (or Νξ). <i>Rev.</i> Edgar Rogers Coll. . Plate VI.</p> <p>23 TETRADRACHM. <i>Obv.</i> Similar. <i>Rev.</i> Similar. On l., outside inscription, <i>Club</i> and ΣΑ. On r., outside inscription, Α. <i>Num. Chron.</i>, 1883. Pl. vi, No. 3; <i>Rev.</i> Edgar Rogers, Plate VI (the club is missing on this specimen).</p> <p>24 CHALKOUS. <i>Obv.</i> Similar diademed head of Seleucus IV to r. Circle of pearls. <i>Rev.</i> ΒΑΣΙΛΕΩΣ above. ΣΕΛΕΥΚΟΥ below. Stern of galley as on the later bronze issues of Antiochus III. In</p>
	N U M I S M A T I C N O T E S

T Y R E	19
<p>field, the date EAP (=178-177 B.C.). Glasgow, Hunterian Coll., No. 11 (gr. 7.55), Pl. lxvi, 5.</p> <p>25 CHALKOUS. <i>Obv.</i> Similar. <i>Rev.</i> Similar, but date is SAP (=177-176 B.C.). Paris, No. 509 (gr. 7.10), No. 510 (gr. 6.80).</p> <p>26 CHALKOUS. <i>Obv.</i> Similar. <i>Rev.</i> Similar, but date is PΛΞ (=176-175 B.C.). Paris, No. 512 (gr. 7.20), Pl. xi, 20; Glasgow, Hunterian Coll. No. 12 (gr. 6.84); Newell Coll., (gr. 6.95) Plate VI.</p> <p>27 CHALKOUS. <i>Obv.</i> Similar. <i>Rev.</i> Similar, but date is PAH (=175-174 B.C.). Newell Coll., gr. 6.30.</p> <p>28 DILEPTON. <i>Obv.</i> Similar. <i>Rev.</i> ΒΑΣΙΛΕΩΣ on r. ΣΕΛΕΥΚΟΥ on l. Palm tree, the whole in circle of dots. Newell Coll. (gr. 2.00) Plate VI.</p>	
A N D M O N O G R A P H S	

20	S E L E U C I D C O I N A G E
	<p>The two tetradrachms described above, bearing the name and portrait of Seleucus IV, follow closely the type and style of his father's last issue in Tyre. Each coin, furthermore, displays in the left field, outside the inscription, the magistrate's initials ΣΑ and beneath them the mint-mark Club—thus exactly reproducing the above mentioned piece of Antiochus III (No. 21). Finally, in the right field of our coins are to be seen either ΝΚ (No. 22) or Α (No. 23), both monograms occurring frequently on preceding coinages. There can be no possible question, therefore, but that we here possess issues for the same mint whose activities we have studied for the preceding reign.</p> <p>The bronze coins, Nos. 24-28, likewise carry on the issues of Antiochus III for Tyre. We see the same types used for the two denominations struck, excepting only that the portrait and name of Seleucus IV have now been substituted for those of his father Antiochus the Great. Similarly, it is only the larger of the two denominations that bear dates, in this case ΕΑΡ</p>
	N U M I S M A T I C N O T E S

T Y R E	21
<p>to PAH inclusive. This latter date PAH (year 138 Aer. Sel. = after September 30th of 175 B.C.) is interesting as its existence on the coinage of Seleucus IV has been questioned more than once. First published by Sestini (<i>Lett. Num.</i> Vol. VIII, p. 110) where, however, the coin has been wrongly described, the portrait of Seleucus being called a bust of Dionysus and the ship's stern a prow—it has been republished by Mionnet although he questions it in the following terms: “<i>Si cette date a été bien lue, elle donne un grand prix à cette médaille qui prolonge le règne de Séleucus IV d'une année ou de quelques mois, puisque c'est en l'an 138 de l'ère des Séleucides qu'Antiochus IV est monté sur le trône.</i>” Furthermore, Cavedoni (<i>Rev. Num.</i> 1856, p. 377) has attempted to reject the date PAH, while Clinton in his <i>Fasti Hellenici</i> does not even mention it under the reign of Seleucus IV. On these apparently sufficient grounds M. Babelon, too, in his “<i>Les Rois de Syrie, d'Arménie et de Commagène</i>,” p. xci, discards the date in question from among the coins of Seleucus. On the other hand,</p>	
A N D M O N O G R A P H S	





22	S E L E U C I D C O I N A G E
	<p>the coin in the author's collection (No. 27) is unquestionably an issue of Seleucus IV as it bears a typical portrait of that king, while the name ΣΕΛΕΥΚΟΥ is plainly visible. The types correct the description of the coin given by Sestini and prove the piece to belong to the issues of the mint now under discussion. The date ΠΑΗ, in its usual position immediately above the stern, is quite legible, and, in particular, the final letter H—the crux of the whole matter—chances to be clearest of all. The coin is not reproduced on our plate as the character of the patina with which it is covered is such that, while the date is quite legible to the naked eye, it has been found impossible to secure a plaster cast of sufficient clearness to make reproduction on the plates worth while.</p> <p>The presence of the date ΠΑΗ on a coin of Seleucus IV is proved by the specimen in the author's collection. Can we explain this appearance in the face of the general scepticism among scholars recorded above? I think the true explanation lies in the circumstances immediately follow.</p>
	N U M I S M A T I C N O T E S

T Y R E	23
<p>ing the assassination of Seleucus IV by his minister Heliodorus. This latter event appears in all probability to have occurred in the summer of 175 B.C., as the chronologists give Seleucus twelve years of reign. Now there followed several months of doubt and uncertainty regarding the succession to the Seleucid throne. Heliodorus as regent probably proclaimed Antiochus, infant son of the murdered king, and carried on the rule in his name. On the other hand, Antiochus, the brother of Seleucus IV, being at Athens when the news of the assassination reached him, immediately proclaimed his own candidacy to the throne. He sailed for Asia Minor and with the assistance of Eumenes, king of Pergamum, finally overcame Heliodorus and secured the dominions of his brother. These events must have covered many months to allow sufficient time for the news to reach Athens, for Antiochus to arrive in Asia Minor, for Eumenes to collect his forces, for the subsequent advance into Syria and for the eventual overthrow of Heliodorus. It might well be, therefore,</p>	
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24	S E L E U C I D C O I N A G E
	<p>that the Seleucid year 138—which we now know for certain saw the striking of bronze coins with the names of both Seleucus IV (No. 27) and Antiochus IV (No. 33)—was already several months old before Antiochus finally found himself completely master of the situation. In the meanwhile things must have been somewhat uncertain. And as small change was needed in Tyre, the authorities there decided to continue the bronze coinage with the old types but bearing the correct date PAH. Such a procedure neither faction could really take amiss. So soon as Antiochus was definitely established in Syria, Tyre hastened to change the old types for the new ones on her coinages.</p> <p>It is, of course, possible that the assassination of Seleucus did not actually take place until after the commencement of the year 138 <i>Aer. Sel.</i> (that is after September or October 175 B.C.)—we do not know the exact date of this occurrence. Such dated cuneiform tablets as have been published⁵ do not help us much in this regard. The latest one dated in the reign</p>
	N U M I S M A T I C N O T E S



T Y R E	25
<p>of Seleucus IV bears the date 135 <i>Aer. Sel.</i> (=177-176 B.C.), while the first one of Antiochus IV was dated on the 22nd day of Iyyar of the year 138. This corresponds to May 174 B.C., as in Babylonian records the Seleucid Era appears to have been computed from the first of Nisan (April) of 312 B.C.</p> <p style="text-align: center;">ANTIOCHUS IV, 175-164 B.C.</p> <p style="text-align: center;">SERIES I.</p> <p>29 TETRADRACHM. <i>Obv.</i> Diademed head of Antiochus IV to r. Around, fillet (?) border. <i>Rev.</i> ΒΑΣΙΛΕΥΣ on r. ANTIOXOY on l. Apollo seated to l. on omphalos, holds arrow in outstretched right hand and rests left on bow. On l., outside inscription, ΣΑ over <i>Club</i>. On r., outside inscription, Α.</p> <p style="text-align: right;">Paris, No. 518. Plate VII.</p> <p>30 DRACHM. <i>Obv.</i> Similar. <i>Rev.</i> Similar. Athens. Plate VII.</p> <p>31 DRACHM. <i>Obv.</i> Similar.</p>	
A N D M O N O G R A P H S	

26	S E L E U C I D C O I N A G E
	<p><i>Rev.</i> Similar, but Club is in exergue and ΣA is missing. Glasgow (Hunterian Coll. No. 6).</p> <p>32 DRACHM. <i>Obv.</i> Similar. <i>Rev.</i> Similar, but Club only on l. Glasgow (Hunterian Coll. No. 7.)</p> <p>33 CHALKOUS. <i>Obv.</i> Similar. Circle of dots. <i>Rev.</i> ΒΑΣΙΛΕΩΣ above. ANTIOXOY below. Stern of galley above which is date Λ ΠΑΗ (=175-174 B.C.). Paris, No. 672 (gr. 7.20), Pl. xiv, fig. 19; Rouvier Coll., No. 1840, where type is wrongly described as <i>prow</i>.</p> <p>34 CHALKOUS. <i>Obv.</i> Similar. <i>Rev.</i> Similar, but date is ΛΘΑΡ (= 174-173 B.C.). Paris, No. 673 (gr. 5.45).</p> <p>35 DILEPTON. <i>Obv.</i> Similar. <i>Rev.</i> ΒΑΣΙΛΕΩΣ on r. ANTIOXOY on l. Palm tree. Rouvier Coll., No. 1845.</p>
	N U M I S M A T I C N O T E S

T Y R E	27
<p style="text-align: center;">S E R I E S I I .</p> <p>36 TETRADRACHM. <i>Obv.</i> Diademed head of Antiochus IV to r. Fillet border around. <i>Rev.</i> ΒΑΣΙΛΕΩΣ on r. ANTIOXOY on l. Apollo, as on No. 29, seated to l. On l., outside inscription,  over <i>Club</i>. On r., outside inscription, .</p> <p style="text-align: right;">R. Jameson Coll., No. 1696. Plate VII.</p> <p>37 TETRADRACHM. <i>Obv.</i> Similar. <i>Rev.</i> Similar. On l., outside inscription,  over <i>Wing</i>. On r., outside inscription, . <i>Club</i> in exergue. Glasgow (Hunterian Coll., No. 5), Pl. lxvi, 10.</p> <p>38. CHALKOUS. <i>Obv.</i> Diademed head of Antiochus IV to r. Behind ΔMP (=169-168 B.C.). <i>Rev.</i> ΒΑΣΙΛΕΩΣ ANTIOXOY TYPIQN in three lines above stern of galley. לער אפצדנמ in two lines beneath. Newell (gr. 7.33); Rouvier Coll. No. 1842, Pl. xviii, 25; London, No. 55; Paris, Nos. 674 (Pl. xiv. fig. 20) to 677 (gr. 7.50, 7.75, 8.50, 7.65).</p>	
A N D M O N O G R A P H S	

28	S E L E U C I D C O I N A G E
	<p>39 CHALKOUS. <i>Obv.</i> Similar, but date is EMP (= 168-167 B.C.). <i>Rev.</i> Similar. Paris, No. 678 (gr. 6.35).</p> <p>40 CHALKOUS. <i>Obv.</i> Similar, but the head is also radiate and there is no date. <i>Rev.</i> Similar inscriptions, but type represents prow of a galley. Paris, Nos. 679-681 (gr. 6.10, 7.70, 6.85); Rouvier Coll. No. 1844. Rouvier describes these coins as showing a prow instead of the stern of a galley, and cites the pieces in the Paris Collection. M. Babelon, however, makes no note of the change in type.</p> <p>In the 138th year of the Seleucid Era, the brilliant but erratic Antiochus IV, surnamed Epiphanes, finally became established as ruler of the empire. This we learn definitely from the dated bronze coins struck in Tyre (Nos. 27 and 33), which in that year substituted his name and portrait for those of Seleucus his predecessor.</p> <p>With regard to the Tyrian silver issues of Antiochus, we should note that the first</p>
	N U M I S M A T I C N O T E S

T Y R E	29
<p>series continues exactly the style and appearance of the Seleucus' coinage for this mint. The two magistrates ΣΑ and Α again sign their initials on the coinage, thus making it certain that we have here the issues of a single mint.</p> <p>The break which occurs in the Tyrian bronze coinage (no issues known between ΘΑΡ and ΔΜΡ) appears to extend to the silver coinage as well. An interval of some years duration must have elapsed between the appearance of Nos. 29 and 36. Though they are evidently the issues of one mint—they both display the club symbol, which by now we have come to recognize as characteristic of our series, and the same magistrate's monogram Α—there is a noticeable difference in style. In this respect the earlier coin is nearest to its immediate predecessors under Seleucus IV. Its style is fine, its relief is still rather high, its flan is small and the surface of its reverse is somewhat concave.</p> <p>On the other hand, Nos. 36 and 37 are more closely allied with the succeeding silver issues under Antiochus V and</p>	
A N D M O N O G R A P H S	

30	S E L E U C I D C O I N A G E
	<p>Demetrius I. Like them, Nos. 36 and 37 are of lower relief and more spread fabric. On No. 37, for the first time, an additional symbol—a wing—appears in the field, and is henceforth always present until the reform instituted in the Tyrian coinage in the first year of Alexander I Bala.</p> <p>ANTIOCHUS V, 164-162 B.C.</p> <p>On the sudden death of Antiochus Epiphanes, his young son, also named Antiochus, succeeded him for a short and troubled reign of two years. None-the-less, both silver and bronze coins were issued in his name at Tyre, as the following pieces bear witness.</p> <p>41 TETRADRACHM.</p> <p><i>Obv.</i> Diademed head of Antiochus V to r. Fillet border.</p> <p><i>Rev.</i> ΒΑΣΙΛΕΩΣ on r. ANTIOXOY on l. ΕΥΠΙΑΤΟΡΟΣ in exergue. Apollo seated to l. as on No. 36. On l., outside inscription,  above <i>Wing</i>. On r., outside inscription,  above <i>Club</i>.</p> <p>London, No. 1. Plate VII.</p> <p>42 DILEPTON.</p> <p><i>Obv.</i> Similar. Border of dots.</p>
	N U M I S M A T I C N O T E S

T Y R E	31
<p><i>Rev.</i> ΒΑΣΙΛΕΥΣ on r. ANTIOXOY on l. Palm tree.</p> <p>Rouvier Coll., No. 1846. Pl. xviii, 23.</p> <p>43 DILEPTON.</p> <p><i>Obv.</i> Similar.</p> <p><i>Rev.</i> Similar, but in field N—P (= 163-162 B.C.).</p> <p>Cat. Walcher de Molthein No. 2947, Pl. xxvi; Newell Coll. (gr. 2.43). Plate VII. Rouvier Coll., No. 1847.</p> <p>In style and appearance these coins are exactly similar to the last issues under Antiochus IV. On the tetradrachm we may notice the monograms of the two magistrates who had previously signed No. 37. Our coin also displays the <i>Club</i> and the <i>Wing</i> symbols. For the first time in our mint there now appears on the silver coinage the official appellation—in this case Εὐπάτωρ—of the ruling king, a custom which had already become prevalent in the central mint of Antioch under Antiochus IV (see the author's "The Seleucid Mint of Antioch," <i>Amer. Jour. of Num.</i>, Vol. LI).</p>	
A N D M O N O G R A P H S	

32	S E L E U C I D C O I N A G E
	<p style="text-align: center;">DEMETRIUS I, 162-151 B.C.</p> <p>44 TETRADRACHM. <i>Obv.</i> Diademed head of Demetrius I. to r., the whole surrounded by a laurel wreath. <i>Rev.</i> ΒΑΣΙΛΕΩΣ on r. ΔΗΜΗΤΡΙΟΥ on l. Tyche enthroned to l., holds short sceptre in r. hand and cornucopiæ in l. On l., outside inscription, ☒ over <i>Club</i>. On r., outside inscription, ☒ over <i>Wing</i>. London, No. 35; Warren Coll., No. 1301. Pl. xxx; Paris (recent acquisition), monogram here is A. Plate VIII.</p> <p>45 TETRADRACHM. <i>Obv.</i> Similar. <i>Rev.</i> Similar. On l., outside inscription, ☒ over <i>Wing</i>. On r., outside inscription, ☒. In exergue, <i>Club</i>. Paris, No. 714, Plate VIII; Glasgow (Hunterian Coll., No. 7).</p> <p>46 DRACHM. <i>Obv.</i> Similar but head is surrounded with a dotted border instead of the laurel wreath. <i>Rev.</i> Similar. On l., outside inscription,</p>
	N U M I S M A T I C N O T E S

T Y R E	33
<p>tion, ☞ over <i>Wing</i>. On r., outside inscription, ☞. In exergue, <i>Club</i>. Egger, XLV, Pl. xix, 680; Rev. Edgar Rogers Coll., Plate VIII; Petrowicz Coll. (Z.f.N. Vol. XXIX, 1912, Pl. iv, 17).</p> <p>47 CHALKOUS. <i>Obv.</i> Diademed head of Demetrius to r. Border of dots. <i>Rev.</i> ΒΑΣΙΛΕΩΣ ΔΗΜΗΤΡΙΟΥ ΛΑΝΡ (=159-158 B.C.) in three lines above stern of galley. ΤΥΡΙΩΝ and לצר beneath. London, Nos. 43 and 44; Paris, No. 770 (gr. 8.10) and No. 771 (gr. 6.05) Pl. xvii, fig. 2; Rouvier Coll., No. 1850; Newell Coll. (gr. 7.24).</p> <p>48 HEMICHALKOUS. <i>Obv.</i> Similar. <i>Rev.</i> ΒΑΣΙΛΕΩΣ ΔΗΜΗΤΡΙΟΥ ΤΥΡΙΩΝ in three lines above prow to l. ΛΑΝΡ (=159-158 B.C.) and לצר in exergue. Rouvier Coll., No. 1848, Pl. xviii, 27; Rev. Edgar Rogers Coll.</p> <p>49 HEMICHALKOUS. <i>Obv.</i> Similar. <i>Rev.</i> ΒΑΣΙΛΕΩΣ ΔΗΜΗΤΡΙΟΥ ΛΑΝΡ in three lines above prow to l. ΤΥΡΙΩΝ and לצר in exergue.</p>	
A N D M O N O G R A P H S	

34	S E L E U C I D C O I N A G E
	<p>Rouvier Coll., No. 1849, Pl. xviii, 26; Rev. Edgar Rogers Coll. Plate VIII.</p> <p>50 CHALKOUS. <i>Obv.</i> Similar. <i>Rev.</i> Similar to No. 47 except that date is LHNP (=155-154 B.C.). Newell Coll (gr. 7.30, 6.25); Paris, Nos. 772 to 774 (gr. 6.10, 7.70, 6.50); London, Nos. 45 and 46; Rouvier Coll., No. 1851; Rev. Edgar Rogers Coll.</p> <p>51 HEMICHALKOUS. <i>Obv.</i> Similar. <i>Rev.</i> Like No. 49 but dated HNP. Rev. Edgar Rogers Coll.</p> <p>52 CHALKOUS. <i>Obv.</i> Similar. <i>Rev.</i> Similar to No. 50, except that the date is ΘNP (=154-153 B.C.). Newell Coll. (gr. 6.55); Paris, Nos. 775, 776 (gr. 7.10, 6.55); London, Nos. 47 and 48; Rouvier Coll., No. 1852; Rev. Edgar Rogers Coll.</p> <p>53 HEMICHALKOUS. <i>Obv.</i> Similar. <i>Rev.</i> Similar to No. 51, except that date is ΘNP. Rev. Edgar Rogers Coll.</p> <p>54 DILEPTON. <i>Obv.</i> Similar. <i>Rev.</i> ΒΑΣΙΛΕΩΣ on r. ΔΗΜΗΤΡΙΟΥ</p>
	N U M I S M A T I C N O T E S

T Y R E	35
<p>on l. Palm tree. Date is EP (=153-152 B.C.). Paris, No. 779 (gr. 2.45), Pl. xvii, fig. 3; Newell Coll. (gr. 2.08, 2.20, 1.80, 1.90). Plate VIII.</p> <p>55 DILEPTON. <i>Obv.</i> Similar. <i>Rev.</i> Similar, except that date reads LA – EP (=152-151 B.C.). Schroeder Coll., Beyrout.</p> <p>Demetrius' Tyrian coins, both in silver and bronze, continue all the features first introduced during the latter portion of Antiochus Epiphanes' reign and continued in the coinage of his young son Antiochus V. The issues of Demetrius are still supervised by the magistrate [X] and the tetradrachms and drachms all bear the symbols <i>Club</i> and <i>Wing</i>. The coinage continues at intervals throughout the twelve years reign of Demetrius until the 161st of the Seleucid era. In that year his rival, Alexander I, surnamed Bala, first secured a good foothold in Phoenicia. The following year the latter finally succeeded in completely overthrowing Demetrius, who perished in a pitched battle fought not far from Antioch.</p>	
A N D M O N O G R A P H S	

36	S E L E U C I D C O I N A G E
	<p>It was in that very same year, namely 162 of the Seleucid Era, that Alexander first introduced the Ptolemaic system of coinage into the Seleucid series. These new tetradrachms and didrachms are of Phoenician weight, they display the portrait of the ruler on the obverse, his name and the Ptolemaic eagle on the reverse. They were first struck in large quantities at the mints of Tyre, Sidon and Berytus. The monograms or symbols of these cities are conspicuously placed in the reverse field. Tyre is designated by a Club and monogram, Sidon by ΣΙ and an Acrostolium, Berytus by a Trident.</p> <p style="text-align: center;">* * * * *</p> <p>In the preceding pages has been described a group of silver tetradrachms and occasional drachms which together form an unusually homogeneous series. With the exception of a few varieties at the very commencement, every one of these silver coins displays a club as symbol, in addition to varying monograms and other symbols. The club, therefore, is the characteristic symbol of this series as a whole, and we</p>
	N U M I S M A T I C N O T E S

T Y R E	37
<p>have every reason for recognizing in it the symbol of the mint which once issued this group of coins. To judge by the portrait of Antiochus III, under whom this issue commenced, its first appearance must be assigned to about the middle of that monarch's reign. It finally came to an end with the accession of Alexander Bala, who substituted his well-known Phœnician tetradrachms with their accompanying smaller denominations. No coins similar to those described in the preceding pages have so far been published or exist in any collection to which the writer has had access, which bear any other portrait than those of the five kings immediately preceding Alexander Bala.</p> <p>In the introduction attention was called to the surprising fact that scholars have not yet been successful in assigning any Seleucid silver issues to the wealthy seaport of Tyre, from the time it was finally captured by Antiochus III to the death of Demetrius I. And yet, throughout these fifty odd years, Phœnicia had formed a vastly important province of the Syrian</p>	
A N D M O N O G R A P H S	

38	S E L E U C I D C O I N A G E
	<p>Empire under the more or less prosperous reigns of Antiochus III, Seleucus IV, Antiochus IV, Antiochus V and Demetrius I. That Tyre really possessed an active mint throughout this very period we are certain because of the large series of named and dated bronze coins whose attribution is absolutely beyond question. Now, as shown above, there has come to light a strikingly homogeneous series of tetradrachms and accompanying drachms which bear the names and portraits of every one of the five missing kings. The series commences abruptly with the tetradrachms of Antiochus III and ends as abruptly with those of Demetrius I. The latter, however, should be compared with the succeeding Phoenician tetradrachms of Alexander Bala, those of Tyrian mintage, which they closely resemble in style and technique. The surmise that one and all were struck in Tyre is definitely confirmed by the practically invariable presence of the club, a symbol which for over four hundred years was continuously employed to indicate the Tyrian mint. Moreover, the</p>
	N U M I S M A T I C N O T E S

T Y R E	39
<p>portraits on the accompanying bronze coins, whose attribution to Tyre is certain, closely resemble in character and workmanship those found on the silver denominations.</p> <p>Thus that unexplainable gap in the Tyrian silver mintage, the only real gap that existed in its issues from the time when the mint was reopened under Antigonos after its closing by Alexander the Great, until the final silver issues under the Roman emperors Trajan and Caracalla, is now apparently closed. Incidentally, one more group of the great Seleucid series can be placed on one side as now assignable, with every appearance of finality, to its original mint—in this case, Tyre.</p>	
A N D M O N O G R A P H S	

40	SELEUCID COINAGE
	<p>NOTES</p> <p>¹ Compare its issues with those of Sidon, Gaza, Ptolemais, or Joppa in Svoronos' "Τὰ Νομίσματα τοῦ Κράτους τῶν Πτολεμαίων."</p> <p>² In a recent letter to the writer, the Rev. Edgar Rogers, well known for his studies of the Seleucid series, made this same observation based upon previous and entirely independent research.</p> <p>³ "The Seleucid Mint of Antioch," <i>Amer. Jour. Num.</i> Vol. LI, 1917.</p> <p>⁴ Rois de Syrie, etc.</p> <p>⁵ A. T. Clay: <i>Legal Documents from Erech</i>, N. Y., 1913, Introd., p. 14.</p>
	NUMISMATIC NOTES

TYRE

PLATE I



I



2



3



5

Antiochus III

Series I

TYRE

PLATE II



6



7



8



Antiochus III

Series II

TYRE

PLATE III



9



10



11

Antiochus III

Series III

TYRE

PLATE IV



I 2



I 4



I 5

Antiochus III

Series III

TYRE

PLATE V



13



17



20



21



Antiochus III

Series III (Nos. 13-20)

Series IV (No. 21)



TYRE

PLATE VI



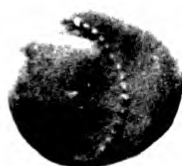
22



23



26



28



Seleucus IV

TYRE

PLATE VII



29



30



36



36



41



43



41

Antiochus IV (Nos. 29-36)

Antiochus V (Nos. 41-43)

TYRE

PLATE VIII



44



45



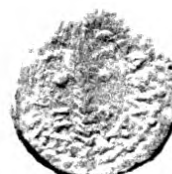
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49



54



Demetrius I

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NUMISMATIC NOTES AND MONOGRAPHS

No. 11



FRENCH ORDERS AND DECORATIONS

By HARROLD E. GILLINGHAM

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The American Numismatic Society. Catalogue of the International Exhibition of Contemporary Medals. March, 1910. New and revised edition. New York. 1911. xxxvi, 412 pages, 512 illustrations. \$10.00.

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NUMISMATIC NOTES & MONOGRAPHS

EDITED BY SYDNEY P. NOE

NUMISMATIC NOTES AND MONOGRAPHS is devoted to essays and treatises on subjects relating to coins, paper money, medals and decorations, and is uniform with Hispanic Notes and Monographs published by the Hispanic Society of America, and with Indian Notes and Monographs issued by the Museum of the American Indian-Heye Foundation.

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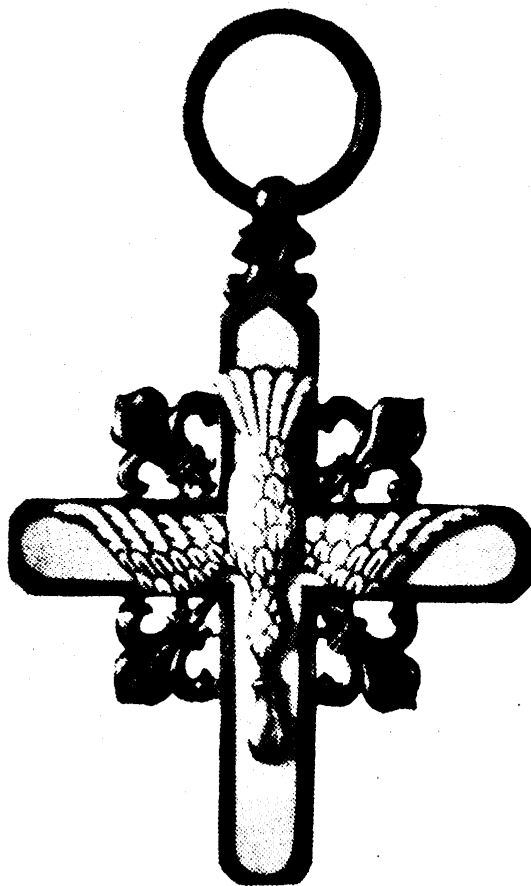
J. SANFORD SALTUS

Officer of the Legion of Honour

TO WHOSE INITIATIVE AND CONTINUED
INTEREST THE AMERICAN NUMISMATIC
SOCIETY IS INDEBTED FOR THE EXCEP-
TIONALLY IMPORTANT COLLECTIONS
OF DECORATIONS AND WAR MEDALS
OF ALL NATIONS IN ITS MUSEUM
THIS COLLECTION HAS DONE MUCH TO
STIMULATE THE AUTHOR'S INTEREST IN
THIS BRANCH OF NUMISMATICS

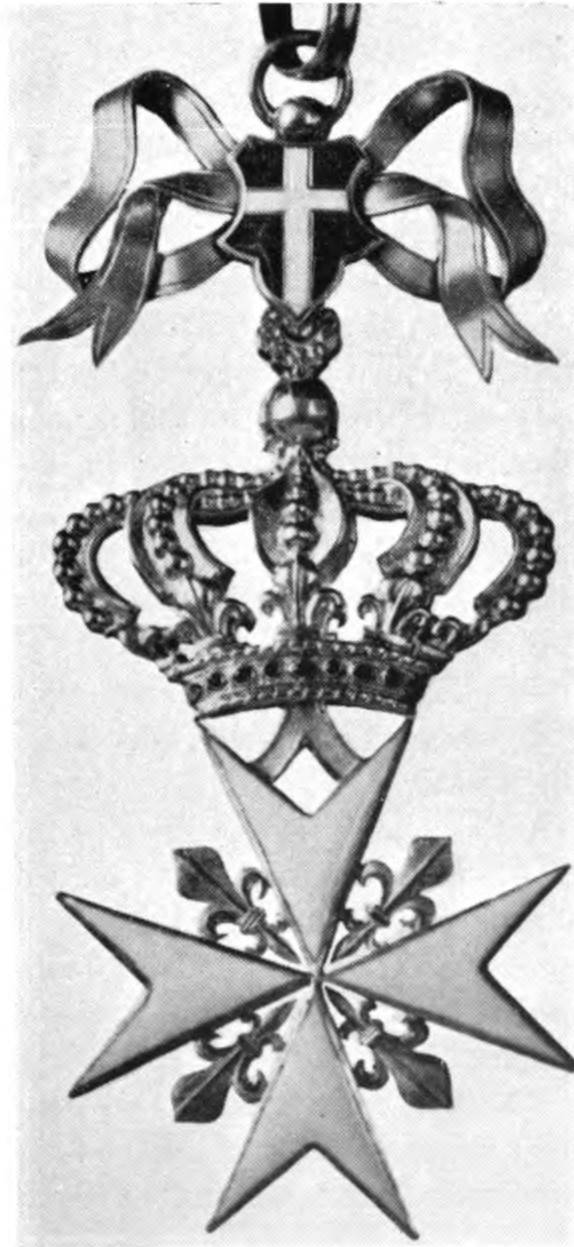
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<p style="text-align: center;">FRENCH ORDERS AND DECORATIONS</p> <p style="text-align: center;">BY HARROLD E. GILLINGHAM</p> <p>From a numismatic standpoint, France is one of the most interesting countries of Europe. There have been few great movements affecting the map of that continent or the welfare of its people without the participation of France. Because of this share in matters of historical importance, French Orders and Decorations, and French awards of honour and bravery have a variety of form and design which would hardly be found in a nation of fewer political upheavals.</p> <p>The present material is submitted in the hope that it may stimulate interest in this branch of Numismatics. Many of the problems which have arisen in its study are complicated; no adequate treatment of them has been found in English. As much of the</p>	
<p style="text-align: center;">N U M I S M A T I C N O T E S</p>	

2	FRENCH ORDERS
	<p>material is in foreign languages, scattered through many volumes, it is to be hoped that this paper will prove useful and of interest to collectors.</p> <p>From 496 to 1783 there were thirty-four Orders created in France. Few, if any, have remained in continuous existence since the beginning of the 19th Century. (See table, pp. 102-105.)</p> <p>ORDRE DE LA SAINTE-AMPOULE. The earliest of these French Orders was created in the year 496 by Hlodiwig, called the Great, but better known as Clovis I, fifth king of France, 481 to 511. The <i>Ordre de la Sainte-Ampoule</i> (Order of the Holy Vial) was probably established in 493, soon after he married Hlotechild, or Clothilde. She was a Christian maiden; and coming under her influence and that of Remigues, Bishop of Rheims, Clovis embraced Christianity. He was baptized by St. Remi in 496, thus sealing an alliance with the Church. Little if anything can be learned as to the period this Order was in existence or concerning its discontinuance. It is said that an</p>
	NUMISMATIC NOTES



Ordre de la Sainte-Ampoule

4	FRENCH ORDERS
	<p>effort was made to revive it during the Restoration but this fact has not been confirmed. The insignia illustrated appears to be of the 18th or 19th Centuries which would indicate an attempted revival of the Order. It is a white enamelled gold cross, with a white and gold dove symbolic of the Holy Spirit. Below it is a jar or vial, also of gold. Gold fleurs-de-lis are in each of the angles of the cross. The enamelled reverse bears the effigy of a bishop in white and red robes. With a staff in his left hand, he stands with his right hand raised invoking a blessing. The ribbon is black moiré.</p> <p>HOSPITALIERS DE SAINT-JEAN DE JERUSALEM. This Order was founded in 1048 by pilgrims to the Holy City. There they had established a hospital for the care of their sick and needy brethren. They were not too pious to fight and when harassed by the Mohammedans in 1118, it was found necessary to change their organization into a religious Order of Chivalry. At one time they were located in the island of Cyprus, and from 1310 to 1522 the island of Rhodes.</p>
	NUMISMATIC NOTES



Hospitaliers de Saint-Jean de Jérusalem (Savoy)
The French type omits the escutcheon

6	F R E N C H O R D E R S
	<p>In 1530 the home of the Order was transferred to the island of Malta. They were driven from there by Napoleon I in 1798. They sought refuge in Rome, where their headquarters is maintained to this day.</p> <p>Some writers class this Order as Papal; by others it is spoken of as the Knights of Malta. It really belongs to several countries, for early in its history langues or branches were established in France, England, Italy, Germany, Provence, Auvergne and Aragon. The last of these was later divided to create the langue of Castile. After the Peace of Amiens in 1802, the langues of Aragon and Castile united under one authority in Spain. Some of these langues are independent of the Roman Headquarters.</p> <p>The Order of the Hospitalers of St. John of Jerusalem in England is influenced and almost entirely managed by members of the Church of England; and the hospitalers confine themselves entirely to charitable and hospital work.</p> <p>The French branch of this Order is not only the oldest but it is the only one in continuous existence since the day of the</p>
	N U M I S M A T I C N O T E S

AND DECORATIONS	7
<p>Crusader. All the branches use the white enamelled Maltese Cross for their insignia of the Order, but with slight variations. Austria has the gold double-headed, triple-crowned eagle in the angles of the cross. For England, the lion and the unicorn appear in the alternate angles. Black eagles with gold crowns are used by Germany; while France, Italy and Spain use the golden fleurs-de-lis in the angles and suspend the cross from a crown, with a ring for the ribbon which in all cases is black moiré. The Papal cross is unadorned in the angles though surmounted by a crown.</p> <p>The banner of the Order is the plain white cross used by the Crusaders. When Amadeus V, Count of Savoy, rendered such heroic assistance to the Knights of St. John during the attack on Rhodes by the Turks under Mahomet II in 1315, he was granted for his personal use the Arms of the Order and given a collar with the letters F. E. R. T., standing for <i>Fortitudo ejus Rhodum tenuit</i> (By his bravery, Rhodes was held). This cross became the Cross of Savoy, and the letters F. E. R. T. appear on several of the</p>	
AND MONOGRAPHS	

8	F R E N C H O R D E R S
	<p>Orders of that country. The Cross is still in use there and appears on the Italian flag, medals and coinage, the present Dynasty being of the House of Savoy.¹</p> <p>ORDRE DU SAINT-SÉPULCRE. It is difficult to assign the founder or ascertain the date of the origin of this Order. A variety of opinions is recorded by the authorities. Some attribute it to Saint James, the Bishop of Jerusalem, in the year 69 and others to St. Helena, the mother of Constantine, in 326. Pope Alexander VI wished to be considered as the founder of the Order, in 1496. As the majority of writers give much credit to "Godefroy de Bouillon, duc de Basse-Lorraine," the first King of Jerusalem, and fix the year as 1099 when the Crusaders again entered Jerusalem, we are not without warrant for classing it among the French Orders.</p> <p>During the 12th Century this Order was established at Saint-Samson d'Orléans, and later spread throughout France. In 1254, Saint-Louis established a branch of the Order of the Holy Sepulchre at Saint-</p>
	N U M I S M A T I C N O T E S



Ordre du Saint-Sépulcre (Spain)
On French type a crown replaces trophy

10	F R E N C H O R D E R S
	<p>Chapelle, after his return from the Crusades. In August, 1814, Louis XVIII granted the members additional privileges, but the Order was suppressed in France in 1823.² The insignia is a four-armed gold cross, potencée (each arm shaped like a T), with a smaller cross of the same description in each of the angles; the whole is a gold rimmed red enamelled cross. The ribbon is black moiré.</p> <p>ORDRE DE SAINT-HUBERT. In 1416, during the reign of Charles VI, several followers of Louis I, Duke of Bār, formed an association for the defence of their sovereign, and called it the <i>Ordre de la Fidélité</i>. Seven years later one chapter of the Order changed its name to the <i>Ordre de Saint-Hubert de Lorraine et du Barrois</i>. They placed themselves under the protection of St. Hubert who had been bishop of Liège in 708. According to the legend, the conversion of Saint Hubert was brought about while he was hunting on Good Friday, by the appearance of a stag bearing a crucifix between its horns. Since then Saint Hubert has been the patron saint of hunters. The Order was</p>
	N U M I S M A T I C N O T E S

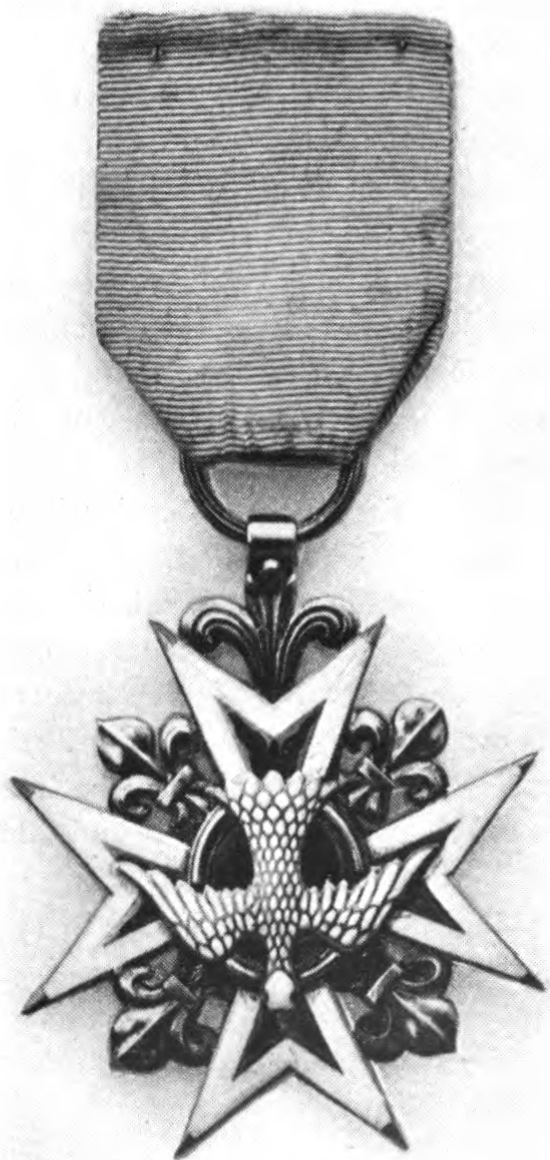
AND DECORATIONS	II
<p>protected by Louis XIV, Louis XV and Louis XVI. It shared the fate of other orders of Chivalry during the Revolution. Louis XVIII caused it to be reestablished in 1816. It was finally abolished in 1824.³</p> <p>The insignia is a gold cross, white enamelled. The centre medallion of green bears a gold representation of St. Hubert's conversion. On the reverse appears the Arms of Bar with the legend <i>ORDO NOBILIS SANCTI HUBERTI INSTITUTUS ANNO 1416</i>. Bavaria also has an Order of Saint Hubert, which was founded in 1444 by Gérard V.</p> <p>ORDRE DE SAINT-MICHEL. Established on August 1, 1469, by Louis XI (1423-1483) to reward those who had distinguished themselves in activities which brought credit to the State. It was suspended in 1789. In 1816 it was revived by Louis XVIII by whom its award was extended to cover services in letters, arts and science. It was definitely abolished in 1830. Specimens of the insignia are occasionally found though they are usually of the Restoration period.</p>	
AND MONOGRAPHS	



Ordre de Saint-Michel

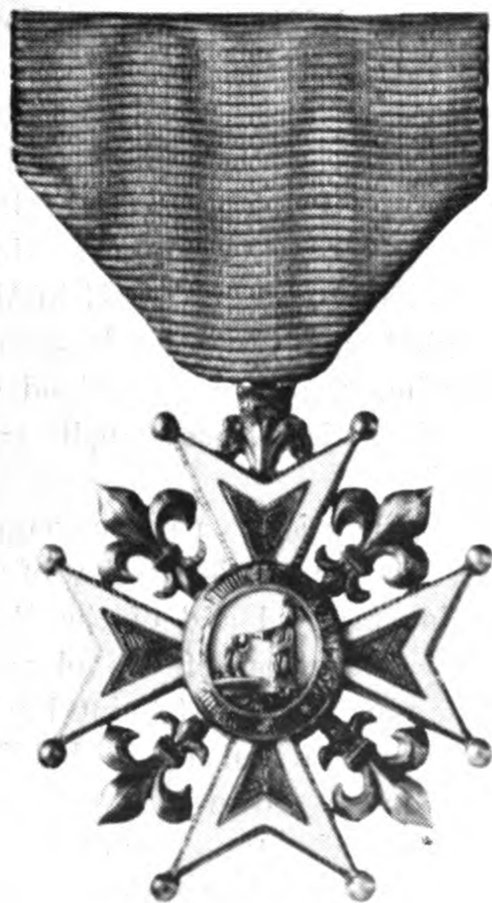
F R E N C H O R D E R S	13
<p>The earlier ones do not have the fleurs-de-lis in the angles.</p> <p>The cross consists of a four-armed, double-pointed, ball-tipped cross with white enamelled rims. The edges and centres are of gold or silver, according to the grade. Fleurs-de-lis are in the angles of the cross arms. An oval medallion in the centre has a figure of Saint Michael slaying the dragon. The reverse is the same. The cross is suspended by a ring for a black moiré ribbon.</p> <p>ORDRE DU SAINT-ESPRIT. This Order was established on December 30, 1578, by Henry III (1551-1589). The object of this Order was to offset the power of the Holy League and to maintain the Catholic Religion, as well as to uphold the dignity of the nobility. It was also to commemorate Henry's accession to the throne of France and his being made King of Poland. The Order was suspended in 1791, revived in 1814 by Louis XVIII, and discontinued in 1830 when Louis Philippe, Duke of Orleans, ascended the throne of France. At that time many of the Peerages and Orders revived</p>	
N U M I S M A T I C N O T E S	

14	FRENCH ORDERS
	<p>or created by Louis XVIII and Charles X were suppressed.</p> <p>During the reign of Louis XVIII the Order of the Holy Spirit ranked in importance with the Order of the Garter of England and the Order of the Golden Fleece of Spain. In 1817 the Danish Ambassador presented the Order of the Elephant of Denmark to the French King. Wishing to show the importance of the Order and its equality with the Saint-Esprit of France, he is said to have remarked to the King, "Our Holy Spirit is an elephant."</p> <p>The Decoration of the Holy Ghost consists of a four-armed, double-pointed, ball-tipped, gold cross, enamelled white and green with gold fleurs-de-lis in the angles. In the centre a white enamelled dove is posed on a background of gold shot with green. On the reverse is depicted St. Michael slaying the dragon. The ribbon for this decoration is blue moiré.</p> <p>ORDRE DE NOTRE-DAME DU MONT-CARMEL. Instituted in 1607 by King Henry IV (1553-1610) in testimony to the sincerity</p>
	NUMISMATIC NOTES



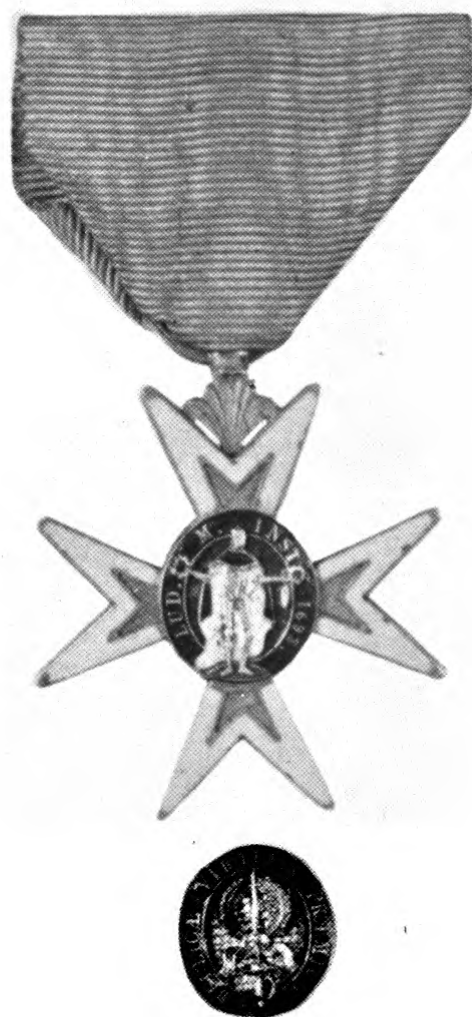
Ordre du Saint-Esprit

16	FRENCH ORDERS
	<p>of his conversion. In 1608 it was united with the <i>Ordre de Saint-Lazare</i>. The latter order was originally founded in Palestine in 1060 by charitable Christians to care for the sick and particularly for the lepers. In 1154 it was established in France by Louis VII, called the Young, who had himself made an unfortunate pilgrimage to Jerusalem. After 1608 it became the <i>Ordre de Saint-Lazare et de Notre-Dame du Mont-Carmel</i>.</p> <p>The insignia of the Order is a cross of green and white enamel. This cross is four-armed, double pointed, ball-tipped and with fleur-de-lis in the angles. In the center of the obverse is depicted the resurrection of Lazarus. A green band inscribed <i>ATAVIS ET ARMIS</i> surrounds this. The reverse has a figure of the Virgin and Child. The ribbon is green moiré.</p> <p>This Order was abolished in 1791 by the Revolutionists. Though revived during the reign of Louis XVIII, it was suppressed fourteen years later during the reign of Louis Philippe.</p>
	NUMISMATIC NOTES



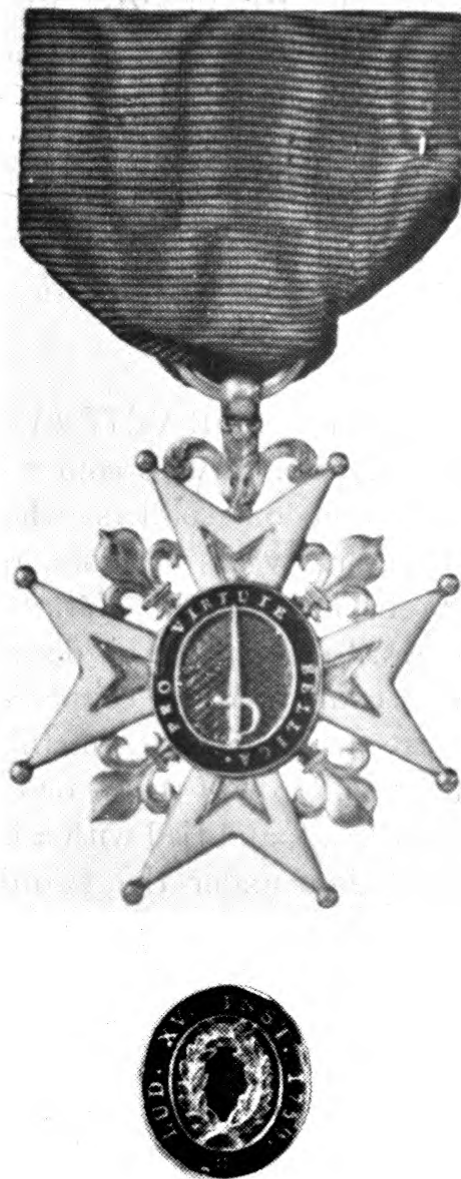
Saint-Lazare et Notre-Dame du Mt. Carmel

18	FRENCH ORDERS
	<p>ORDRE ROYAL ET MILITAIRE DE SAINT-LOUIS. On April 5, 1693, eight years after the revocation of the Edict of Nantes, Louis XIV (1638-1715) founded the <i>Ordre Royal et Militaire de Saint-Louis</i>. It was used to reward his officials who had professed the Catholic faith and who had rendered distinguished service. It was confirmed by Louis XV. Suppressed in 1789 and was revived by Louis XVIII in May, 1816. Though dormant by 1830, it was not finally discontinued until 1848. Good specimens of this insignia are occasionally to be found today."</p> <p>The decoration is a white enamelled gold cross, similar in design to that of the Orders of Saint Michael and of the Holy Spirit. On the medallion of the obverse is the ermine-robed figure of Saint Louis in gold armour and Royal robes, holding in his right hand a crown of thorns and in his left a laurel wreath. Around the figure on a blue band is the inscription, <i>LUD[OVICUS] M[AGNUS] INST[ITUIT] 1693</i>. On the reverse, an upright sword impales a laurel wreath, and the whole is surrounded by a</p>
	NUMISMATIC NOTES



Ordre de Saint-Louis
Before 1830, fleurs-de-lis filled the angles

20	FRENCH ORDERS
	<p>blue band with the words, <i>BELL[ICAE] VIRTUTIS PRAEM[IUM]</i> (The reward of warlike courage). The inscription is in full on some varieties. The ribbon is bright red moiré.</p> <p>Prior to the Restoration there were no fleurs-de-lis in the angles of the cross. Variants of this insignia have ball-tipped points, and one has a gold knot between the insignia and the ribbon ring; on another, the inscription on the obverse is <i>LUD. M. INST. 1693.</i></p> <p>ORDRE DU MÉRITE MILITAIRE. Founded on March 10, 1759, by Louis XV (1710-1774) but only for officers of the Protestant faith whom he desired to reward for services rendered the Crown and State. This Order shared the fate of the Order of Saint Louis, being suppressed during the Revolution. It was rehabilitated in 1816 and was definitely discontinued in 1848.</p> <p>The decoration is similar to that of Saint Louis—a ball tipped white enamelled cross with a red-enamel centre displaying two laurel branches, surrounded by a blue band</p>
	NUMISMATIC NOTES



Ordre du Mérite Militaire

22	F R E N C H O R D E R S
	<p>inscribed <i>LUD[OVICUS] XV INST[ITUIT] 1759</i>. The reverse shows a gold sword upright. On an enclosing blue enamelled band are the words <i>PRO VIRTUTE BELLICA</i>. A variant has on the obverse <i>LUDOVI XV INSTITUIT 1759</i>, and on the reverse <i>PRAEM. BELL. VIRTUTIS</i>. The ribbon is blue moiré.</p> <p>MÉDAILLE DE VÉTÉRANCE. The desires of Louis XV to confer some mark of distinction on soldiers who had served twenty-five years or more, resulted in the establishment of the <i>Médaille de Vétérance</i> on April 16, 1771. This decoration consists of an oval wreath of copper-gilt with a red centre made of silk. On this silk are two crossed swords of metal or embroidered in gold thread, and tied with a knot of ribbon. An anchor under the swords indicates a Veteran of the Navy. The veterans who had served forty-eight years received two such decorations joined together. The oval when surmounted by a crown had the signification that the recipient was an Officer.</p>
	N U M I S M A T I C N O T E S

AND DECORATIONS	23
<p>REVOLUTION</p> <p>Although the Revolution of 1789-1790 was brought about mainly because the populace of France wanted a liberal Constitution and were weary of the rule of kings, the people had become so accustomed to the pomp of Royalty and to the decorations, so often the evidence of Royal favour, that it seemed very natural to them to have some means of distinguishing the real workers from the non-combatants.</p> <p>MÉDAILLE DES VAINQUEURS DE LA BASTILLE. The Commune of Paris adopted on September 1st, 1789, an insignia to reward the victorious <i>Citoyens</i> who had brought about the fall of the Bastille on July 14 of that year. It is called the <i>Médaille des Vainqueurs de la Bastille</i>. This was abolished in 1793. The decoration is in gold, bronze-gilt and bronze, in the form of a diamond lozenge, with pellets at the angle points and with suspension ring for the red ribbon edged with gold. Later a tri-coloured ribbon was used. The design on the obverse consists of several chains to which are attached</p>	
AND MONOGRAPHS	

24	FRENCH ORDERS
	<p>two balls and a padlock. The surrounding inscription reads <i>LA LIBERTE CONQUISE LE 14 JUILLET 1789</i> (Liberty acquired July 14, 1789). On the reverse is a crown of laurel through which passes an upright sword. It is surrounded by the inscription <i>IGNORANT NE DATOS NE QUISQUAM SERVIAT ENSES</i> (Are they ignorant that swords were given to abolish slavery?).</p> <p>MÉDAILLE DES SAUVEURS DU TRÉSOR DE LA VILLE DE PARIS. On October 15, 1789, the Commune recommended that a silver medal be given to the members of the National Guard who had saved the Treasury of the City of Paris. This was called the <i>Médaille des Sauveurs du Trésor de la Ville de Paris</i>. It is oval in form suspended by a ring with a ribbon of red and blue, the colours of the city. The obverse bears the Arms of Paris with a Liberty cap and the words <i>MAIRIE DE PARIS</i> above. On the reverse is a wreath of laurel and the inscription <i>TRESOR DE LA VILLE SAUVE ET CONSERVE LE 15 OCTOBRE, 1789</i>.</p>
	NUMISMATIC NOTES



Vainqueurs de la Bastille

26	F R E N C H O R D E R S
	<p>MÉDAILLE DU COMMISSIONNAIRE NATIONAL. The National Commissioners wore around the neck, suspended from a tri-coloured ribbon, an oval bronze-gilt decoration. This consists of a band surrounding a radiant sun and in the blue-enamelled centre, on three lines, the words <i>COMMISSIONNAIRE NATIONAL</i> in gold lettering. The Administrators of Districts and of Departments wore from a similar ribbon an oval silver medal of 40x45 mm., with the words <i>RESPECT A LA LOI</i> in three lines, surrounded by oak wreaths. The obverse and reverse are the same.</p> <p>Judging by the great variety of these Revolutionary decorations and insignia of office to be seen in the several collections in Paris, it would appear that there were few <i>Citoyens</i> who were not decorated for one cause or another. One can readily understand why the people of France so soon accustomed themselves to, and coveted, the Crosses of the Legion of Honour which Napoleon I distributed. France has always recognized the value of a visible evidence of service.</p>
	N U M I S M A T I C N O T E S

AND DECORATIONS	27
<p>ORDRE NATIONAL DE FRANCE. This Order was projected by a Committee of the Constituent Assembly in 1789. It is cited by A.-M. Perrot as one which was soon discontinued, and by Major Lawrence-Archer as having long been dormant or extinct. The latter gives date of foundation as 1783.</p> <p>The decoration is a white enamelled gold cross, with double points which are ball-tipped. Fleurs-de-lis are in each angle. In a blue medallion on the obverse are the letters <i>R.N.</i> (signifying <i>Récompense Nationale</i>). This is surrounded by a white circle inscribed <i>INSTITUE EN 1789</i>. On the reverse are two clasped hands in white on a blue field, surrounded by a white circle containing the legend <i>PRIX DE VERTU</i>. The ribbon is the tri-colour of France.</p> <p>ÉTOILE DE LA LÉGION D'HONNEUR. The "Little Corsican" entered the arena of French politics and became First Consul in 1799. In May, 1802, he caused to be created the <i>Légion d'Honneur</i>, the main purpose of which was to reward <i>all</i> Citizens for military and civil services of importance. In so doing</p>	
AND MONOGRAPHS	

28	FRENCH ORDERS
	<p>he made it appear to the Revolutionists that there were to be no Court favorites. Sir Bernard Burke says in his work entitled <i>The Book of Orders of Knighthood and Decorations of Honor</i>, "The real object, however, of the First Consul in creating this Chivalry, to which merit of every social grade was eligible, was to popularize the idea of personal distinction, and pave the way for the establishment of the Empire, and the more exclusive titles of nobility which accompany it."</p> <p>There were four grades of membership in the Order—Légionnaires (later called Chevaliers), Officers, Commandants (later called Commanders) and Grand Officers. Napoleon created a fifth grade in 1805, called Grand Eagles or Grand Crosses. There were in addition educational and charitable organizations, such as schools where children of the Légionnaires were educated and orphan boys received military training. The Decoration of the Order was originally called the Eagle, though in the form of a five armed cross. After Napoleon became Emperor it was known as the Cross</p>
	NUMISMATIC NOTES



Légion d'Honneur
First Empire First Type

30	F R E N C H O R D E R S
	<p>of the Legion of Honour, as the "Distribution of Crosses" at <i>l'Église des Invalides</i> on July 15, 1804, signifies. Napoleon chose the fifteenth anniversary of the fall of the Bastille for the first public distribution of the Grand Cross. But as that day happened to fall on Saturday, the ceremony was postponed until the following day, Sunday, July 15, 1804 (<i>le 26 messidor, an XII</i>). On this occasion the principal personages of the Empire were honoured with the decoration. A painting of this subject in the <i>Musée de Versailles</i> shows Napoleon on the throne attaching the Cross to the breast of a wounded veteran supported by an officer.</p> <p>The next great public presentation of Crosses took place at the camp at Boulogne on August 16, 1804 (<i>le 28 thermidor, an XII</i>) in the presence of 90,000 soldiers and sailors. At this time the service men worthy of decoration were honoured with the cross⁴.</p> <p>In 1814, the Legion had nearly thirty-seven thousand members; since then the number has increased greatly.</p> <p>The Cross consists of a five-armed, double-pointed star of white enamel, edged with</p>
	N U M I S M A T I C N O T E S

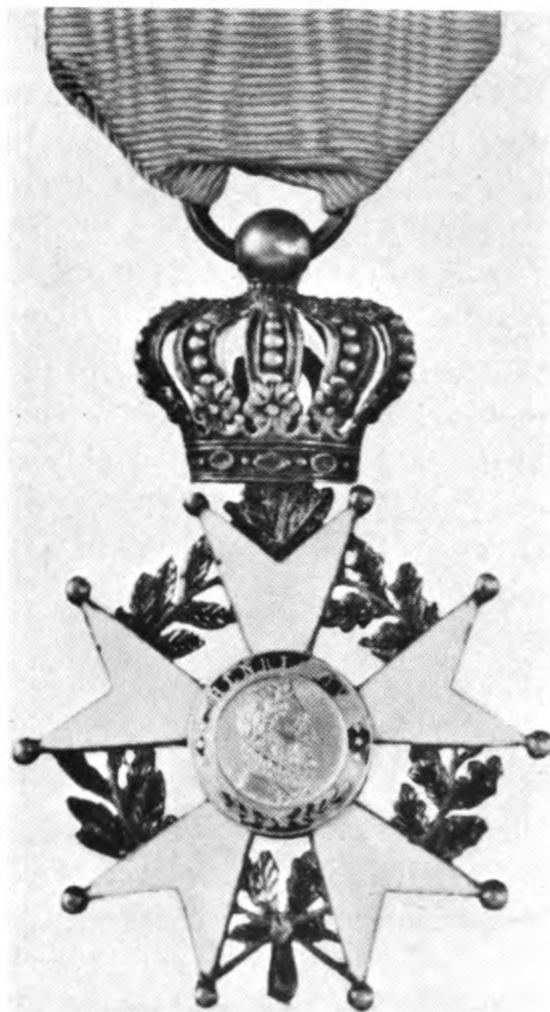


Légion d'Honneur

First Empire

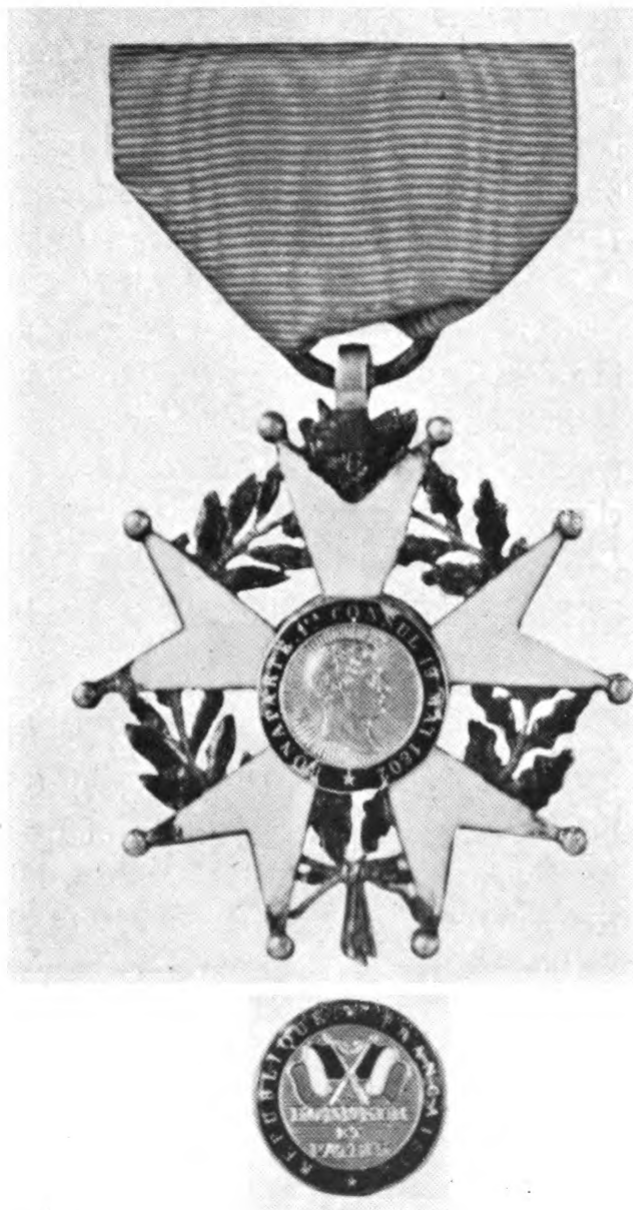
Third Type

32	F R E N C H O R D E R S
	<p>gold (or silver, according to the grade). The arms are united by a wreath of oak leaves on one side and of laurel leaves on the other. In the centre on a gold-rayed medallion appears the laurel-crowned effigy of Napoleon facing to the right. On the encircling band of blue enamel appears the inscription <i>NAPOLEON EMP[EREUR] DES FRANÇAIS</i> and three stars. On the reverse is the Imperial eagle facing to the left, and on a blue enamelled border <i>HONNEUR ET PATRIE</i>, with three stars. The ribbon is red moiré. During the First Empire the first and second types of the cross had the eagle facing to the left; in the third and fourth types it faces in the opposite direction. The second type of the cross is surmounted by the Imperial crown of twelve branches, which is soldered to the points of the upper cross arms; above this is a globe with a small cross above it and within the suspension ring. In the third and fourth types the crown which is mobile has but eight branches. The cross of the fourth type is ball-tipped at the points as are succeeding varieties. In some varieties the head of</p>
	N U M I S M A T I C N O T E S



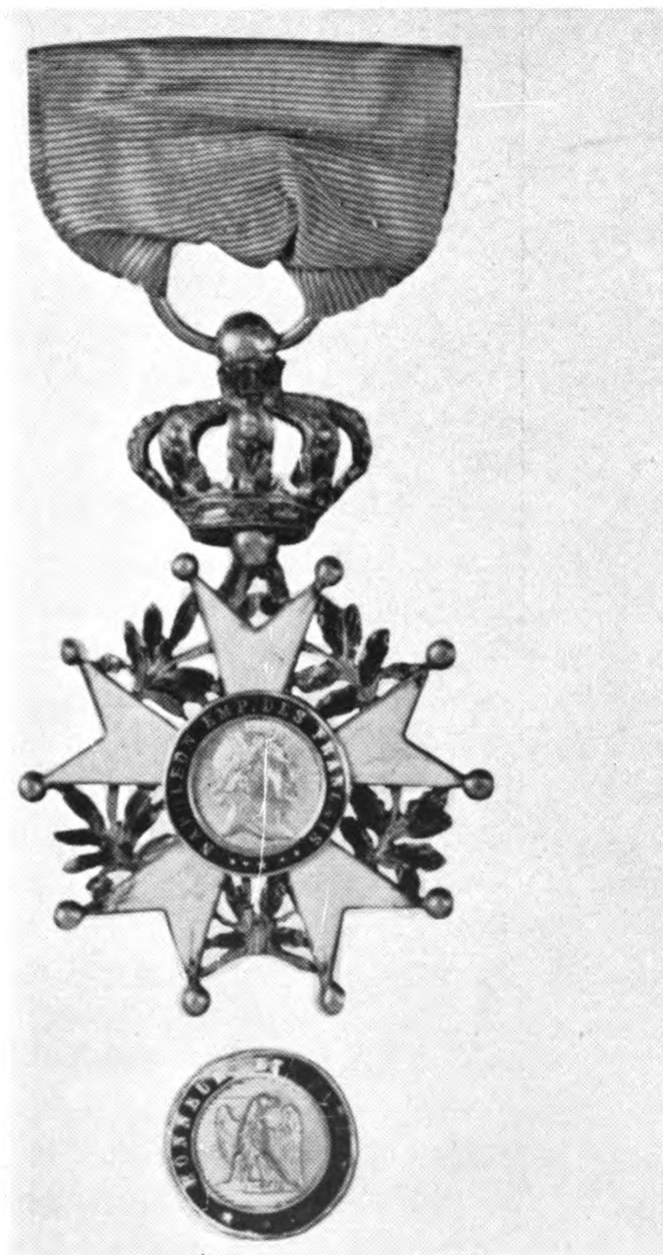
Légion d'Honneur
Louis-Philippe

38	F R E N C H O R D E R S
	<p data-bbox="776 384 1114 415">LOUIS-PHILIPPE, 1830</p> <p data-bbox="592 436 1295 978">After the second Revolution and the deposition of Charles X in July, 1830, Louis-Philippe (1773-1850), the son of the Duc d'Orléans, reaffirmed the <i>Légion d'Honneur</i>. He changed the inscription on the obverse to read merely <i>HENRI IV</i>; while the three fleurs-de-lis on the reverse were replaced by two crossed flags of France. Variants appear with the globe above the crown and no cross in the suspension ring. Others bear on the obverse the inscription used during the Restoration.</p> <p data-bbox="789 1020 1097 1052">SECOND REPUBLIC</p> <p data-bbox="592 1073 1295 1566">After the abdication of Louis-Philippe in 1848, and during the Second Republic, the cross was again altered. The crown was removed; and the manner of affixing the suspension ring was changed, the loop was attached to the wreath rather than to the globe as in the first type of the time of Napoleon I. The second marked change showed itself on the obverse, which bore the uncrowned effigy of Napoleon I facing to the right, surrounded by the words, <i>BONA-</i></p>
	N U M I S M A T I C N O T E S



Légion d'Honneur
Second Republic

40	F R E N C H O R D E R S
	<p><i>PARTE 1^{er} CONSUL 19 MAI 1802</i>, on a blue enamelled band. There are variants showing the <i>19 MAI 1802</i> under the bust of Napoleon, while others have <i>18 MAI 1802</i>. The reverse shows the crossed flags, and below them the words <i>HONNEUR ET PATRIE</i>; the whole is surrounded by the inscription <i>REPUBLIQUE FRANÇAISE</i> on a blue enamelled band. Variants of the reverse have <i>HONNEUR ET PATRIE</i> encircling the centre medallion instead of <i>REPUBLIQUE FRANÇAISE</i>, and on the second the two flags tied with a ribbon.</p> <p style="text-align: center;">SECOND EMPIRE</p> <p>After having been President of the Second Republic for about three years, Charles Louis Napoleon (the third son of Hortense Beauharnais and Louis Bonaparte, King of Holland) was declared Emperor of France on December 2, 1852, and recognized as Napoleon III. A complete restoration of the <i>Légion d'Honneur</i> to the original design followed almost immediately. The Imperial Crown of eight palm branches with an eagle at the base of each branch was authorized.</p>
	N U M I S M A T I C N O T E S

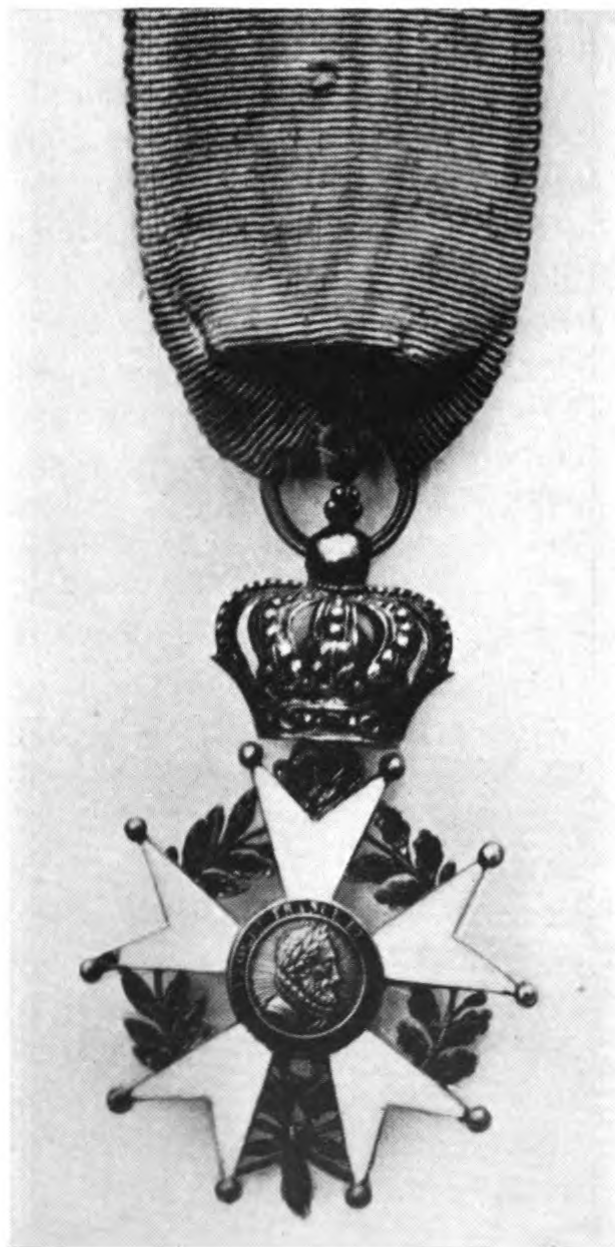


Légion d'Honneur

First Empire

Fourth Type

34	F R E N C H O R D E R S
	<p>Napoleon differs in size; while in one case the head faces to the left. Slight differences in the size of the wreath's leaves are also to be noticed.</p> <p style="text-align: center;">R E S T O R A T I O N</p> <p>When Louis XVIII ascended the throne of France in 1814 after the abdication of Napoleon I and his departure for Elba, it was thought he might suppress the <i>Légion d'Honneur</i>. Such was not the case, however. Not only did he revive many of the Orders and Decorations of the Ancient Régime, but he continued the <i>Légion d'Honneur</i> although he altered the design of the decoration somewhat by substituting the fleurs-de-lis for the eagle on the reverse. The obverse was also changed—the effigy of Henry IV facing to the right replaced that of Napoleon, while on the encircling band he placed the words <i>HENRI IV ROI DE FRANCE ET DE NAVARRE</i>. This use of the effigy of a king so long deceased earned for the Order the popular cognomen “Holy Ghost.” And these crosses are often mistakenly supposed to belong to the time</p>
	N U M I S M A T I C N O T E S



Légion d'Honneur
Restoration

36	F R E N C H O R D E R S
	<p>of Henry IV by owners who fail to remember that the Order was instituted in 1804.</p> <p>Variants of this type appear. In one the crown has twelve branches; in others there are but eight. One type has fleurs-de-lis at the base of the crown branches; another type shows the fleurs-de-lis replacing the small cross on the globe within the suspension ring. In all probability there are other slight variations, but they may be considered as hardly worthy of record.</p> <p style="text-align: center;">O N E H U N D R E D D A Y S</p> <p>When in the Spring of 1815 Napoleon I returned from Elba, once more to assume the Imperial crown, he re-established the laws of 1814 as they affected the Legion of Honour. The battle of Waterloo, with its results so disastrous to his ambitions, upset all that he had done, and Louis XVIII had only to reaffirm previous laws made during the first Restoration, and these continued unchanged by Charles X until the time of Louis Philippe. None of the authorities on the subject record any material change in the Decoration of the Order.</p>
	N U M I S M A T I C N O T E S



Légion d'Honneur
Third Republic

46	FRENCH ORDERS
	<p>but the Chapels and the Educational management were under the jurisdiction of the Bishop of the diocese.</p> <p>Some writers record that as early as 1809 Napoleon intended to establish a special form of Decoration for the women in charge of the <i>Maisons d'Éducation de la Légion d'Honneur</i>. Nothing seems to have been accomplished, however, and it was not until 1816 that a Decoration was created by Louis XVIII. This consists of a white enamelled cross pattée surmounted by a Royal Crown. In the angles of the cross are fleurs-de-lis. On the obverse centre in an oval medallion is a gold figure of the Virgin on a blue field, surrounded by the words <i>MAISON ROYALE DE ST. DENIS</i>. On the reverse centre of blue are three gold fleurs-de-lis surrounded by the inscription <i>DIEU LE ROI LA PATRIE</i>. The ribbon is white moiré with red bands. The decorations of the first class are of gold and were for the nuns and higher teachers. The second class, of silver, was for the novices.</p> <p>In 1857, under Napoleon III, the decoration was changed. Between the arms of the</p>
	NUMISMATIC NOTES



Dames de la Légion d'Honneur

48	FRENCH ORDERS
	<p>cross are rays instead of the earlier fleurs-de-lis. The inscription on the obverse reads <i>MAISON DE ST. DENIS</i>. The reverse medallion has in its centre the words <i>HONNEUR ET PATRIE</i> surrounded by the inscription <i>LEGION D'HONNEUR</i> on a white enamelled band. The ribbon was changed to red moiré.</p> <p>In 1881 the decoration was changed to a cross with five branches instead of four. The cross is surmounted by the <i>Palmes d'Académie</i>. The medallion in the centre is circular and bears on the obverse in gold letters, the words <i>LEGION D'HONNEUR</i>. It is surrounded by a band inscribed <i>MAISON D'EDUCATION</i>. On the reverse is the motto <i>HONNEUR ET PATRIE</i> in gold letters on a blue field. The ribbon is also red moiré.</p> <p>There is also a <i>Médaille d'Honneur</i> which is for lesser distinction. It is oval in form, bearing in the centre the Cross of the <i>Légion d'Honneur</i>. Above it, the motto <i>HONNEUR ET PATRIE</i> appears—below, <i>MEDAILLE D'HONNEUR</i>. It is surmounted by a suspension ring.</p>
	NUMISMATIC NOTES



Légion d'Honneur
Second Empire

42	F R E N C H O R D E R S
	<p>It is surmounted by a globe and has a cross within the suspension ring. It is these eagles which distinguish the cross of the Second Empire from that of the First. The medalion too was changed; the obverse bears the effigy of Napoleon I crowned with laurel, facing to the right. It is surrounded by the words <i>NAPOLEON EMPEREUR DES FRANÇAIS</i>; a variant has the abbreviation, <i>EMP</i>. The reverse is almost identical with the cross of the fourth type of the First Empire save that in this type the eagle faces right, rests on a thunderbolt and holds six crossed arrows, while the three stars in the lower part of the blue band are replaced by two laurel branches. On Plate XVI the decoration shown is that of an officer of the Legion.</p> <p>There is such a similarity between the two types that the cross of the Second Empire is frequently confused with that of the time of Napoleon I. It was the fortunate discovery of a cross of this type in a Paris pawn-shop in 1899 which led to the author's collecting these interesting and beautiful objects.</p>
	N U M I S M A T I C N O T E S

AND DECORATIONS

43

THIRD REPUBLIC

With the declaration of the Third Republic, on September 4, 1870, a complete and decided change was made in the *Étoile de la Légion d'Honneur*. By a decree of the 8th of November, 1870, the Government of the National Defence ordered that the Imperial crown above the cross be replaced by a wreath of oak and laurel leaves. The effigy of Napoleon I in the centre medallion was replaced by a laurel-crowned female head facing to the right, typifying the Republic. It is surrounded by the inscription *REPUBLIQUE FRANÇAISE 1870*. The reverse has two tri-colours tied at the staffs, and surrounded by *HONNEUR ET PATRIE* and two branches of laurel on a blue enamelled band. In the Commander's cross of this period several red holly berries are to be seen on each wreath. A variant of this cross occurred in a sale in Paris during 1914, showing a crown instead of the wreath above. There seems to be no authority for these variants, and it is to be assumed that they are merely the result of the maker's idea or his carelessness as to details.

AND MONOGRAPHS

44	F R E N C H O R D E R S
	<p>As at the beginning, the ribbon today is the bright red moiré decreed by the first Napoleon, who is said to have won many faithful followers by his lavish distribution of the "eagle" and the red ribbon. As Pliny the elder wrote (Lib. IV, cap. xi, 24) "It requires lemon as well as sugar to make punch." So with the principal decoration of France. The ribbon together with the cross is needed to perfect the attractiveness of the <i>Légion d'Honneur</i>. The brilliancy of the ribbon, the whiteness of the enamelled cross and the blue band of the medallion, blend into a harmonious whole, whose elements are those of the flag of the nation. One might go further and see in the green wreath a suggestion of the colouring of their well kept fields and vineyards, and in the oak the strong spirited loyalty to their land.</p> <p>DAMES DE LA LÉGION D'HONNEUR. Napoleon I established three Schools for the orphans of the Légionnaires as early as 1805. These were at Saint-Denis, Écouen and Les Loges. The direction thereof was under the Grand Chancellor of the Legion of Honour,</p>
	N U M I S M A T I C N O T E S

AND DECORATIONS	49
<p>ORDRE DE LA COURONNE DE FER. Instituted by Napoleon I on June 5, 1805, after he had been crowned at Milan as King of Italy. It was given to those who had rendered service to the Crown whether in the Army, in the Administration, or in Arts and Letters. The insignia consists of the crown of Lombardy of blue enamelled gold; it has ten ball-tipped points and ten flowers and jewels above the head band. Within the crown on a thunder-bolt is the Imperial eagle, facing to the left. Superimposed on the crown in a medallion is the effigy of Napoleon I, facing to the left, with the Imperial crown and a laurel wreath (green enamel) upon the head. The inscription on the band reads <i>DIO ME LA DIEDÉ GUAIÀ CHI LA TOCCA</i> (God gave it to me, Let him who touches it beware.) The ribbon is yellow moiré with a narrow green edging.</p> <p>This Order was evidently given to French citizens, as the author has a plaque with the inscription in French. Variants show the head of Napoleon facing to the right. After the fall of the French Empire and the annexation of Lombardy by Austria, the</p>	
AND MONOGRAPHS	



Ordre de la Couronne de Fer

F R E N C H O R D E R S

51

Emperor, Francis I, reconstituted the Order in 1815, but with an Austrian eagle and of course a different crown. This was known as the Austrian Order of the Iron Crown.

ORDRE DES TROIS TOISONS D'OR. This Order was projected by Napoleon I and his plans for it were announced on August 15, 1809, at the camp of Schönbrunn. There seems to have been no decoration definitely established. The authorities on the subject give no description, and the Order probably never went beyond the initial stages. Specimens of the decoration of the Order of the Three Golden Fleeces are sometimes seen, but their appearance is such as to make their genuineness doubtful.

PALMES UNIVERSITAIRES. When the University of France was created on March 17, 1808, three honorary titles were established—Dignitaries, Officers of the University and Officers of the Academy. At first, the emblems of their distinction, the *Palmes Universitaires*, were embroidered on the coat. Later, silver enamelled palm and

N U M I S M A T I C N O T E S



Palme Universitaires

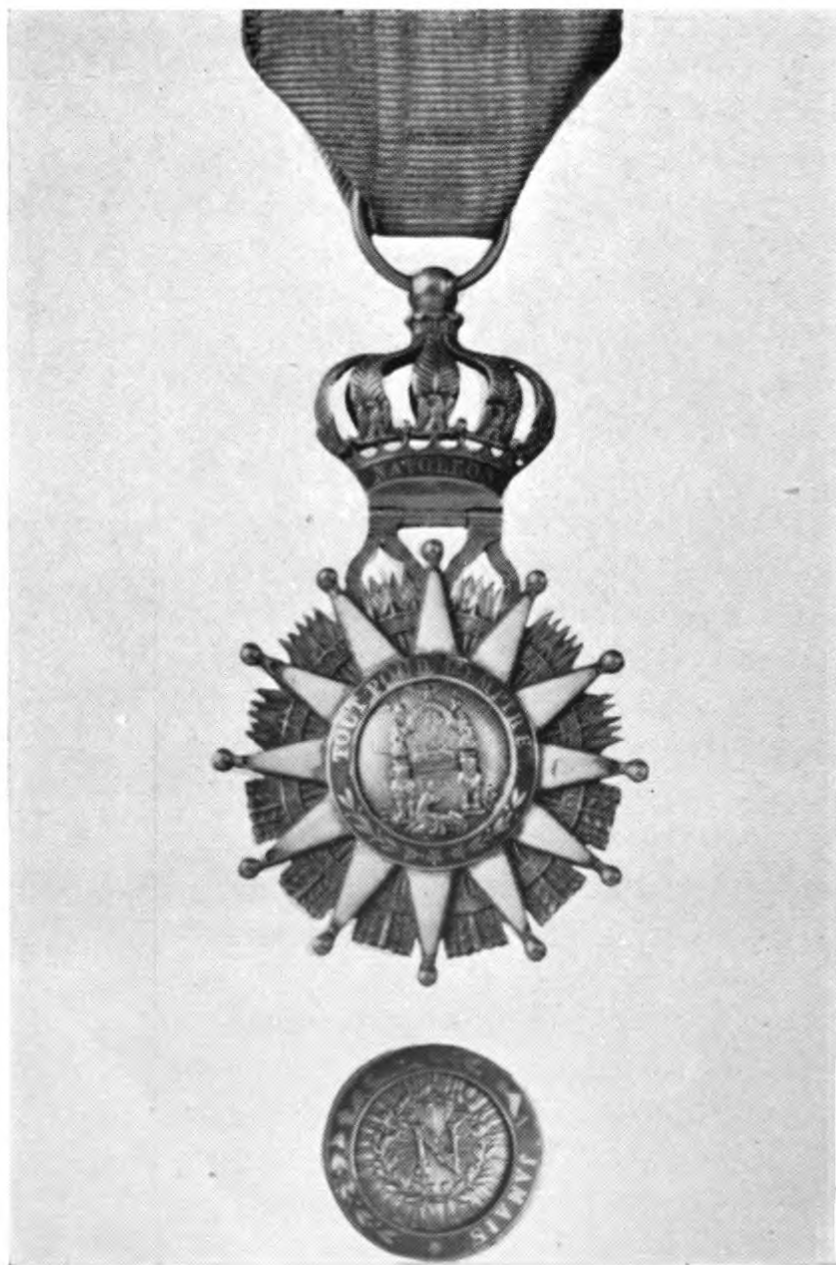
F R E N C H O R D E R S

53

laurel branches were adopted, to be suspended by a violet moiré ribbon, and this procedure has continued ever since.

ORDRE DE LA RÉUNION. Founded by Napoleon I in October, 1811, to replace a similar order of Holland when that country was annexed. The decoration is in the form of a white enamelled star with twelve ball-tipped points. This star is superimposed on a gold disc formed by thirty arrows in bundles of five—the arrows representing the thirty Departments of Italy which had been annexed at the same time. The heads of the arrows occupy six of the spaces between the points of the star, while the butts fill the other (upper) six; the whole having the effect of a sun-burst. On the gold band at either side of the point of suspension appears the motto *A JAMAIS*. On the obverse medallion is a throne surmounted by an eagle holding in one claw nine arrows, to represent the Provinces of Holland; in the other he holds a trident, to signify the ports of Genoa and Hamburg. On one side of the throne appears the lion of Holland; on the

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Ordre de la Réunion

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<p>other, the lion of Florence, and at the base of the throne is the she-wolf of Rome, showing quite clearly the figures of Romulus and Remus. Around this appears the motto <i>TOUT POUR L'EMPIRE</i> on a blue enamelled band. The reverse shows <i>N</i> within a laurel wreath, and <i>A JAMAIS</i> on a blue band surrounding it. The words are repeated on both sides on the outer band. Above this star is the Imperial crown, with the words <i>NAPOLEON FONDATEUR</i> on the blue head band. A gold cross is within the suspension ring. The ribbon is light blue with lateral bands of white. This Order was suppressed in 1815 after only four years of existence.</p> <p>Several other Orders created under the Napoleonic influence should be mentioned at this juncture.</p> <p>ORDRE DE L'UNION DE HOLLANDE. Created by Louis Bonaparte (1778-1846) in 1806. After passing through several modifications, its name was changed in 1807 to the <i>Ordre Royal de l'Union de Hollande</i>. The cross is an eight-pointed gold star, white enamelled and with ball-tipped points.</p>	
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56	F R E N C H O R D E R S
	<p>Gold bees are in the angles and a gold crown surmounts it. On the obverse appears the effigy of the King, surrounded by the words <i>LODWIJK NAP. DE I^a KONING VAN HOLLAND</i>. The reverse has the lion of the Netherlands, and the legend <i>DOE WEL EN ZIE NIET OM</i> (Do well and look not around). The ribbon is light blue moiré. This Order was abolished in 1810, and those who had been favoured with the decoration were given that of the Order of the Reunion of France, created by Napoleon I in 1811.</p> <p>MÉDAILLE D'HONNEUR DE HOLLANDE. This medal was authorized on July 18, 1808, by Louis Bonaparte—or Louis Napoleon, as he is frequently called. The object of this was to reward acts of bravery. It was issued in two classes, gold and silver. The medal is 45 mm. in diameter. Around the sides are laurel wreaths. In the centre of the obverse is engraved <i>BELONING VAN UTMUNTENDE DAPPERHEID, 14 SEPT. 1809</i> (Reward for Distinguished Bravery). On the reverse is engraved <i>LODEWIK NAP. DE I^a KONING VAN HOLLAND AAN</i>——</p>
	N U M I S M A T I C N O T E S



Ordre Royal des Deux Siciles

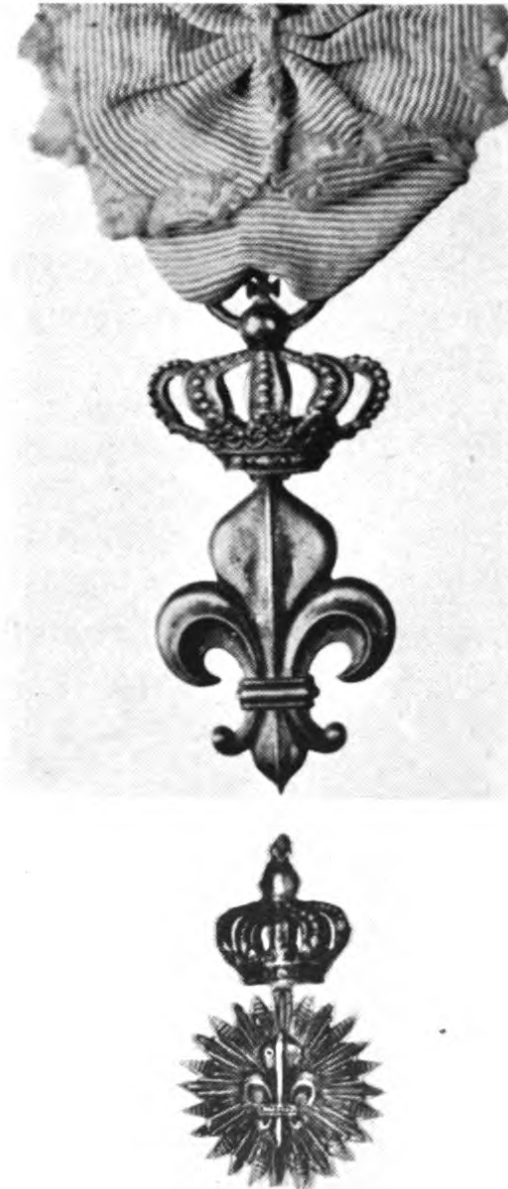
58	FRENCH ORDERS
	<p>(the name of the recipient). The ribbon for this is light blue.</p> <p>ORDRE ROYAL DES DEUX SICILES. Founded by Joseph Bonaparte (1768-1844), King of Naples, on February 24, 1808. It consists of a red enamelled star of five points with ball tips and gold edges, above which is an Imperial eagle; the whole is surmounted by a crown with a cross within the suspension ring. On the gold ground of the obverse medallion is the prancing horse of Naples, surrounded by a blue band inscribed <i>PRO RENOVATA PATRIA</i>. Against the gold background of the reverse medallion is the Sicilian Triquetra with a face in the centre, and on the encircling band is the legend <i>JOS. NAP. SICILIARUM REX</i>. The ribbon is dark blue with a red stripe in the centre. Authorities give different inscriptions for the reverse—<i>JOS. NAPOLEO. SICILIAE REX INSTITUIT</i>; <i>JOSEPH NAPOLEO SICIL. REX INSTITUIT</i>; <i>JOS. NAPOL. SIC. REX INSTITUIT</i>. This Order was continued during the reign of Murat, and until 1815 when Ferdinand IV regained</p>
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<p>the throne of his kingdom. It was modified by this king, but abolished in 1819 when the Order of Saint George of the Reunion of Sicily was established.</p> <p>MÉDAILLE D'HONNEUR (Naples). After Murat (1767-1815) became King of Naples in 1808, he authorized a <i>Médaille d'Honneur</i> for the Provincial Legion. This was issued on March 26, 1809. It is of silver and is 38 mm. in diameter. On the obverse is the effigy of the King facing to the left, surrounded by the words <i>GIOACCHINO NAPOL. RE DELLE DUE SICIL.</i> On the reverse is a group of fourteen flags and a crown, with the inscription <i>ALLE LEGIONI PROVINCIALI LI 26 MARZO 1809.</i> The ribbon is light blue.</p> <p>ORDRE ROYAL D'ESPAGNE. Joseph Bonaparte (1768-1844) created this Order in 1809. The insignia is similar in design to the Royal Order of the Two Sicilies but without the eagle and crown. It is suspended by a ring attached to one star point. On the obverse appears the tower of Castile and the</p>	-
AND MONOGRAPHS	

60	F R E N C H O R D E R S
	<p>words <i>JOS. NAPOLEO REX HISP. ET IND.</i> The reverse has the lion of Aragon and the motto <i>VIRTUTE ET FIDE</i>. The ribbon is red moiré.</p> <p>ORDRE DE LA COURONNE DE WEST-PHALIE. Instituted when Jérôme Bonaparte (1784-1860) was King of that Principality, by a decree dated from Paris on December 25, 1809. It was created for the purpose of rewarding both soldiers and civilians for services of importance. There are four classes—Grand Commanders, Commanders, Chevaliers of the first class and Chevaliers of the second class. The decoration consists of a gold crown of eight fleurons, with a blue enamelled head-band bearing the motto of the Order, <i>CHARACTER UND AUFRICHTEIT. ERRICHTET DEN XXV DECEMBER MDCCCIX</i> (Dignity and candour. Founded December 25, 1809). One authority, however, gives this motto as <i>CHARACTER UND AUFRICHTIGKEIT—ERRICHTET DEN XXV DEC. MDCCCIX</i>. Above the crown in the centre, an eagle and a lion stand back to back beneath another</p>
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AND DECORATIONS	61
<p>crown. At the right is the horse of Westphalia, and to the left is the lion of Hesse. The Imperial Eagle standing on a thunderbolt, bearing the words <i>JE LES UNIS</i> (I united them), surmounts the whole. The reverse is the same except that on the lion and eagle there is a shield upon which the letters <i>H.N.</i> are interlaced. The suspension ring is in the form of a serpent with its tail in its mouth—a symbol of immortality. The ribbon is black with yellow borders.</p> <p>MÉDAILLE D'HONNEUR (Westphalia). Created by Jérôme Bonaparte on June 17, 1809, for sub-officers and soldiers who had served at least ten years and who had distinguished themselves while in the service. This medal is of silver, oval in form, and bears on the obverse a trophy of arms and military equipment. Surrounding this are the words <i>TAPFERKEID UND GUTES BETRAGEN</i>. On the reverse is the Royal cipher <i>J.N.</i>, crowned, and the date of the foundation, 1809. The whole is enclosed by a wreath of oak and laurel leaves. The ribbon is sky blue.</p>	
AND MONOGRAPHS	

62	FRENCH ORDERS
	<p>A third class medal was also issued in bronze, of the same design, and suspended by a sky blue ribbon with white edges.</p> <p>DÉCORATION DU LIS. During the early days of the first Restoration, upon his arrival in Paris on April 12, 1814, the Count d'Artois (later Charles X. 1824-1830) caused to be distributed to the National Guard of that City, white ribbons, which were to be worn as a badge of fidelity. To perpetuate the remembrance of this distribution, they were later granted the right to suspend from the ribbon a silver fleur-de-lis. For his attendants this device was surmounted by a Royal crown. Such was the origin of the <i>Décoration du Lis</i>, sometimes called the Order of the Lily. The form of the lily, as well as the design of the ribbon, varies with each Department of France. They are generally to be seen with a white moiré ribbon. Monsieur A.-M. Perrot illustrates in his <i>Ordres des Chevalerie</i>, 1820, eighty varieties of ribbons for this decoration. Occasionally one sees a design with a shield bearing the effigy of the King. There was</p>
	NUMISMATIC NOTES



Décoration du Lis

64	FRENCH ORDERS
	<p>also used a cross of four arms with a fleur-de-lis in each angle. The centre medallion has one fleur-de-lis and the words <i>VIVE LE ROI</i>. This Decoration disappeared in 1830.</p> <p>LYS DES GARDES DU CORPS. It consists of a gilt sunburst surmounted by a Royal Crown. In the centre is an effigy of Louis XVIII, surrounded by a blue enamelled band inscribed <i>VIVE LE ROI</i>. On the reverse is a silver fleur-de-lis and the legend <i>GAGE D'UNION</i>. The ribbon is white with blue edges. Variants of this emblem appear; one has merely a silver fleur-de-lis on each side, while another has the motto <i>HONNEUR ET PATRIE</i> on the reverse.</p> <p>DÉCORATION DE BRASSARD DE BORDEAUX. This decoration was adopted for the volunteers who accompanied the Duc d'Angoulême (the elder brother of Charles X.) when he entered Bordeaux on March 12, 1814. It was officially called <i>Brassard de Bordeaux</i>, or <i>Brassard Vert</i>. At first it consisted of a silk band of green with white borders, worn, as the name signifies, on the</p>
	NUMISMATIC NOTES

AND DECORATIONS

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arm. Some are all green, others white with green borders. On this band is embroidered a heart and the inscription *BORDEAUX 12 MARS 1814*. Later, another form was adopted. This consists of an oval gilt sunburst on which is superimposed an oval medallion of white enamel bearing the royal monogram *L.L.*, and surrounded by a green enamelled band with the words *BORDEAUX 12 MARS 1814*. The whole is surmounted by the royal crown. The reverse is the same. The ribbon is green with white edges. This decoration was discontinued after the revolution of 1830.

DÉCORATION DU LYS DE BAYONNE. While not official, this decoration was worn by the National Guard of the city of Bayonne in remembrance of its part in the defence of 1814 against the troops under the Duke of Wellington. It is an oval silver medal in the form of a sunburst, having at the centre a convex white-enamelled medallion. On this is the Arms of the City of Bayonne, surrounded by the motto *NUM-QUAM POLLUTA* (Never dishonoured). The

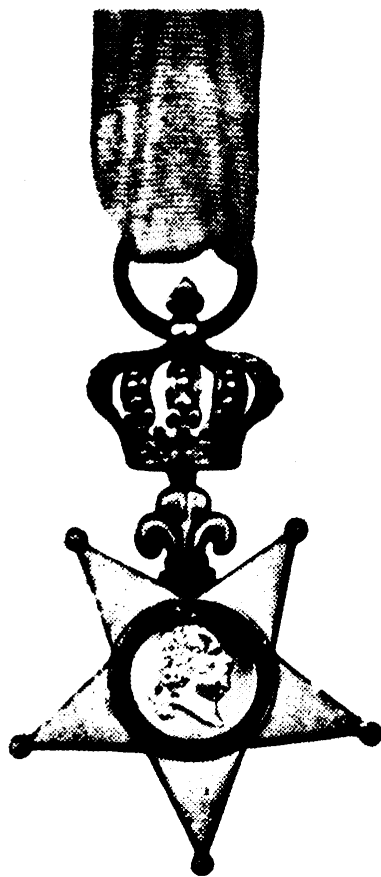
AND MONOGRAPHS

66	F R E N C H O R D E R S
	<p>reverse has a silver fleur-de-lis, a crown and the words <i>A LA GARDE NATIONALE DE BAYONNE</i>. The ribbon is white.</p> <p>DÉCORATION DES VOLONTAIRES ROYAUX. Carried by the pupils of the Law School and of the Medical School who had organized themselves into a battalion and had accompanied King Louis XVIII to Ghent during the Hundred Days. The decoration consists of a silver white-enamelled cross of four branches, ball-tipped. The whole is surmounted by a crown. In the centre medallion of gold is the effigy of the King, surrounded by a band inscribed <i>DIEU LE ROI ET LA PATRIE</i>. The reverse medallion of red has the date <i>1815</i> surrounded by <i>VOLONTAIRES ROYAUX</i>. The ribbon is white with two red lines on either side.</p> <p>DÉCORATION DE L'AIGLE. When Napoleon I returned to Paris from Elba and re-established the Empire for <i>les Cent-Jours</i> (from March 20 to June 28, 1815), an insignia was issued called the <i>Décoration de</i></p>
	N U M I S M A T I C N O T E S



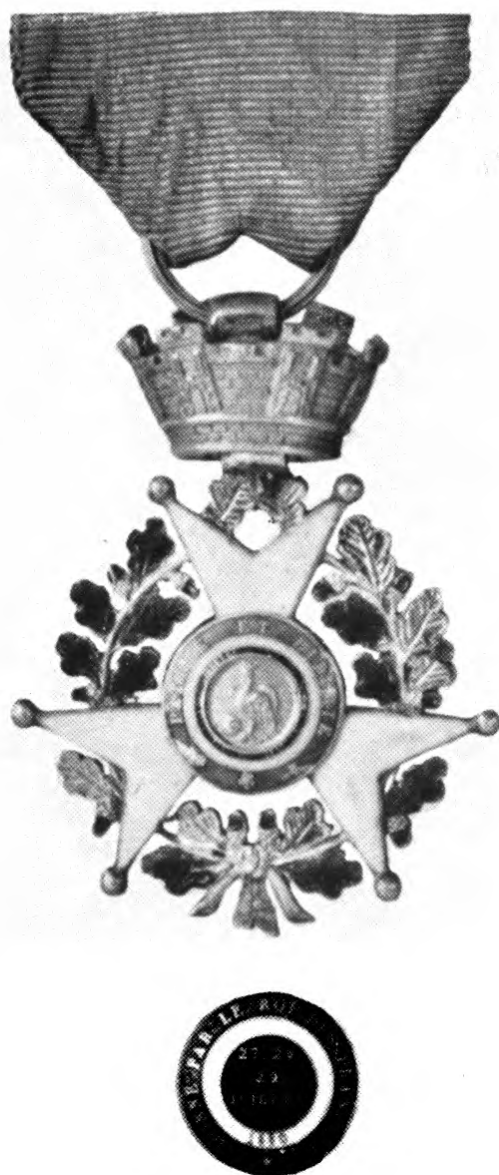
Décoration de l'Aigle

68	F R E N C H O R D E R S
	<p><i>l'Aigle</i>. The object of this was to distinguish his supporters from those of Louis XVIII who wore the <i>Décoration du Lys</i>. The badge consists of an eagle surmounted by a crown, holding in its beak a fillet on which is impressed the date 1815. No authority for this decoration has been found, and it is hardly proper to consider it official.</p> <p>CROIX DE LA FIDÉLITÉ. Authorized on February 5, 1916, to replace the Decoration of the Lily. It was given to those who were faithful to Louis XVIII upon the abdication of Napoleon I. The insignia is a white enamelled silver star of five points, ball-tipped, surmounted by a fleur-de-lis and the Royal crown, with a smaller fleur-de-lis within the suspension ring. At the centre of the obverse, a gold medallion bears the effigy of the King, facing to right. The medallion is surrounded by a blue band inscribed <i>Fidélité Dévouement</i>. The reverse medallion displays a silver fleur-de-lis on a gold ground surrounded by a blue band inscribed 12 AVRIL, 3 MAI 1814, 19 MARS, 8 JUILLET, 1815. The ribbon consists</p>
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Croix de la Fidélité

70	FRENCH ORDERS
	<p>of three bands equal in width, that in the middle being white, the outer ones, blue.</p> <p>DÉCORATION DE JUILLET 1830. When the people of France revolted on July 27, 28 and 29, 1830, against those who had violated the Constitution, the Chamber of Deputies placed Louis Philippe, Duc d'Orléans, a member of the younger house of the Bourbons, on the throne. To reward the citizens who had distinguished themselves during those three famous days, the <i>Croix de Juillet</i> was authorized by the decree of December 13, 1830. Although called a cross, it has but three double pointed arms which are ball-tipped. It is on a wreath of oak leaves and surmounted by a mural crown. At the centre of the obverse, are red, white and blue enamelled bands encircling the Gallic cock, with the words <i>PATRIE ET LIBERTE</i> on the red band. The reverse is similarly banded with 27, 28, 29 <i>JUILLET</i>, in three lines on the blue centre, 1830 on the white band and <i>DONNE PAR LE ROI DES FRANÇAIS</i> on the outer band of red. The ribbon is sky blue, edged with red.</p>
	NUMISMATIC NOTES



Décoration de Juillet, 1830

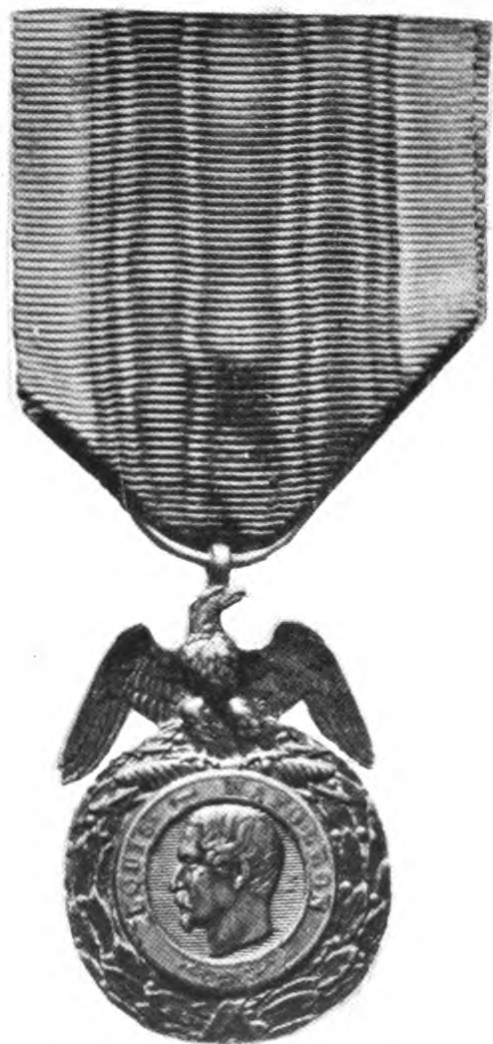
72	F R E N C H O R D E R S
	<p>There are several variants of this decoration. On one there is no crown above the cross and the inscription 27,28,29, <i>JUILLET</i>, appears on the red band, while 1830 is in the blue centre. The reverse has <i>PATRIE ET LIBERTE</i> on the red band with <i>DONNE PAR LA NATION</i> in the blue centre. Another variant is composed of three enamelled tricoloured flags instead of the cross, while the centre is a reproduction in miniature of the silver medal next described.</p> <p>MÉDAILLE DE JUILLET. This medal was also authorized and is in silver. On the obverse appears the Gallic cock of France standing on a flag within a wreath of oak leaves, around which are the words <i>A SES DEFENSEURS LA PATRIE RECONNAISSANTE</i> (A grateful country to its defenders). On the reverse are three laurel wreaths intertwinéd, encircling the dates 27, 28, 29. Beneath, <i>JUILLET 1830</i>; above, <i>PATRIE ET LIBERTE</i>. On the edge of the medal, <i>DONNE PAR LE ROI DES FRANÇAIS</i>. The ribbon is red, white and blue.</p>
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<p>MÉDAILLE DES BLESSÉS DE 1848. After the Revolution of 1848 and the abdication of Louis Philippe, General Cavaignac submitted to the Assembly the desirability of issuing a medal to reward those who were wounded at that time. This does not seem to have been adopted by the Legislative authorities. There was, however, a medal made and issued called the <i>Médaille des Blessés de 1848</i>. This may have been devised by a society of the veterans of that eventful occasion. The medal is of silver, 20 mm. in diameter. On the obverse appears the figure of a woman with a helmet on her head. Her right hand holds a flag, and the left a fasces. The words <i>REPUBLIQUE FRANÇAISE</i> appear on the face. The reverse has within an oak wreath 22, 23, 24 <i>FEVRIER, 1848</i>; and outside the wreath, <i>BLESSE POUR LA LIBERTE</i>, and the name of the recipient. The ribbon is red, with a blue and a white stripe on one side only.</p> <p>MÉDAILLE DES VICTIMES DU 2 DÉCEMBRE 1851. This decoration was of the same class as the <i>Médaille des Blessés de</i></p>	
AND MONOGRAPHS	

74	F R E N C H O R D E R S
	<p>1848. The obverse is the same but the reverse has the words <i>VICTIME DE 2 DECEMBRE 1851</i> within an oak wreath, while around the edge appears in relief <i>DEFENSEUR DU DROIT</i>, and engraved below is the name of the one to whom the medal was awarded. One in the author's collection bears the name "Vve. Benjamin Colin." The ribbon is like that described above—red, with a white and a blue stripe on one side only.</p> <p>MÉDAILLE DE 1849. After defeating Garibaldi at Rome in 1849 and holding that city for the Pope, the French troops taking part in the campaign were rewarded by the Papal authorities with the <i>Médaille de 1849</i>. This was a round medal of 30 mm. and was issued in gold, silver and bronze. On the obverse are the Pontifical emblems, surrounded by a wreath of laurel and the words <i>SEDES APOSTOLICA ROMANA</i>. The reverse bears the inscription in five lines, <i>PIUS IX PONT. MAX. ROMAE RESTITUTUS CATHOLICIS ARMIS COLLATIS. AN. MDCCCXLIX</i> (Pius IX Pontifex Maxi-</p>
	N U M I S M A T I C N O T E S

AND DECORATIONS	75
<p>mus restored to Rome by the Armies of the United Catholics). This is suspended by a white ribbon with a yellow stripe in the centre.</p> <p>CROIX DE MENTANA. Authorized by Pope Pius IX in 1867. This was to reward troops that had taken part in the defence of the Holy City and assisted the Church of Rome. This decoration was recognized and accepted by the French Government in 1868; and Frenchmen who were entitled to it were permitted to wear the cross under the same conditions as the British medals for the Baltic, and the Turkish and British medals for the Crimean campaigns. It is a silver four-armed, eight-pointed cross. On the obverse are the Pontifical emblems at the centre with the words <i>FIDEI ET VIRTUTI</i>. On the arms of the cross is the inscription <i>PP PIUS IX 1867</i>. On the reverse medallion is a cross and laurel wreath with the words <i>HINC VICTORIA</i> above. The ribbon is white with two blue stripes.</p>	
AND MONOGRAPHS	

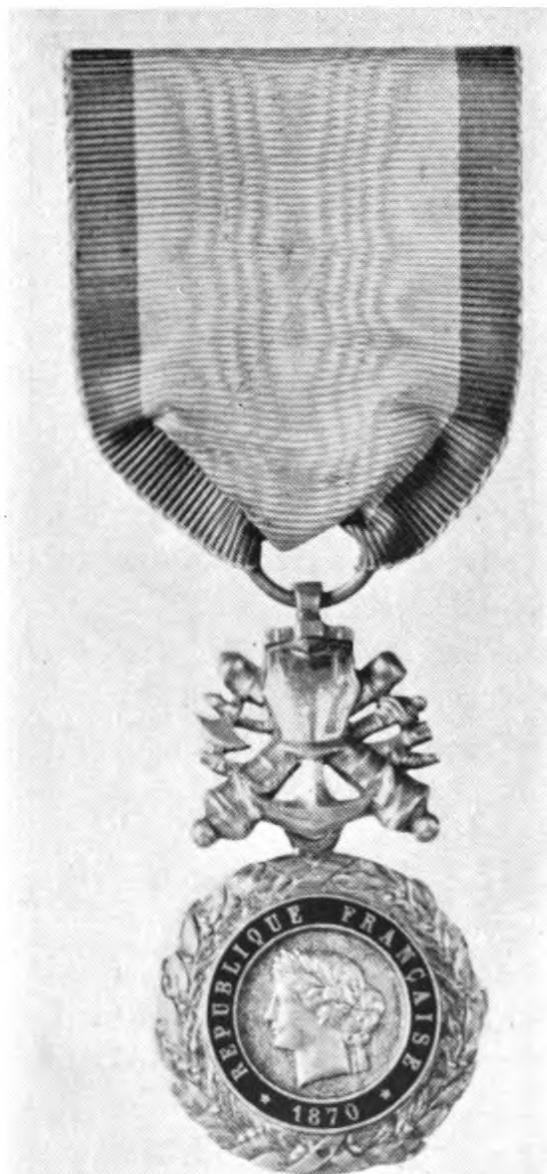
76	F R E N C H O R D E R S
	<p>MÉDAILLE MILITAIRE. Authorized on January 22, 1852, during Prince Louis Napoleon's Presidency of the Second Republic. It was issued for bravery and long service in the army and navy to junior officers and enlisted men. This decoration ranks with the Distinguished Conduct Medal of England. It is now also awarded to men of the allied forces. It consists of a silver-gilt wreath of laurel leaves, tied at the base and at the top with narrow gilt fillets. In the centre of the obverse on a gilt ground, is the head of Louis Napoleon facing to the left, and around this on a blue enamelled band, the words <i>LOUIS NAPOLEON</i>. The reverse bears the inscription <i>VALEUR ET DISCIPLINE</i>. The whole is surmounted by a gilt Imperial Eagle with head to the right, holding in its claws a thunder-bolt. On the reverse the tail of the eagle extends over the blue enamelled band and the wings are attached to the silver-gilt wreath. In a second model, the lightning-arrows are more pronounced and the eagle's tail falls short of the centre band. The wings too are free from</p>
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Médaille Militaire

Second Republic First Type

78	FRENCH ORDERS
	<p>the wreath, and the entire piece is somewhat thicker than the first type.</p> <p>On November 8, 1870, just fifty-five days after the proclamation of the Third Republic and the downfall of Napoleon II, a decree was issued modifying the <i>Médaille Militaire</i>. The centre of the obverse displays the head of Ceres. On the encircling band are the words <i>REPUBLIQUE FRANÇAISE 1870</i>. The reverse centre is unchanged. The eagle is replaced by a trophy of arms and an anchor. These are the same on each side, and are fastened to the laurel wreath. In a still later type the trophy of arms is plain on the reverse and is attached to the medal by a ring under the anchor so that it is movable. There is also a slight variation in the way the hair of Ceres is tied. The ribbon has always been the same—orange, edged with green.</p> <p>An interesting variant of the <i>Médaille Militaire</i> was adopted to reward the Annamite troops who were worthy of distinction. It consists of a round silver medal, surmounted by a dragon and two crossed Chinese swords. In the centre are Chinese</p>
	NUMISMATIC NOTES



Médaille Militaire
Third Republic Second Type

80	FRENCH ORDERS
	<p>characters equivalent to the reverse inscription, <i>PROTECTORAT DE L'ANNAM ET DU TONKIN VALEUR ET DISCIPLINE</i>, surrounded by oak and laurel leaves.</p> <p>ORDRE DU MÉRITE AGRICOLE. This Order was established on July 7, 1883, to reward those who had distinguished themselves in agricultural development. The decoration consists of a six-pointed, white-enamelled star superimposed upon a wreath of olive leaves. In the centre is the head of the Republic, surrounded by a blue band inscribed <i>REPUBLIQUE FRANÇAISE</i>. The reverse gold centre has the words <i>MÉRITE AGRICOLE 1883</i>, in three lines. The ribbon is green, edged with red.</p> <p>MÉDAILLE DE SAINTE-HÉLÈNE. Napoleon III instituted on August 12, 1857, a bronze medal to reward all living soldiers and sailors who had fought for France from 1792 to 1815. It is an oval bronze wreath with a crown above, and has in the centre the effigy of Napoleon I facing to right, and the words <i>NAPOLÉON I EMPEREUR</i>. On</p>
	NUMISMATIC NOTES



Mérite Agricole

82	F R E N C H O R D E R S
	<p>the reverse is the inscription, <i>CAMPAGNES DE 1792 A 1815 A SES COMPAGNONS DE GLOIRE SA DERNIERE PENSEE. SAINTE-HELENE 5 MAI 1821</i>. The ribbon is dark green with seven narrow red stripes. While this is officially styled the <i>Médaille de Sainte-Hélène</i>, it is frequently mentioned as the Medal for Napoleon's Veterans. When Napoleon III adopted the <i>Médaille de Sainte-Hélène</i>, it was the first time that any medal or decoration had been given to the rank and file of service men to distinguish their having been in the armed forces of France. Although no service medals were authorized by France for her soldiers and sailors who had served in the Crimean War, the Governments of England, Italy and Turkey distributed medals similar to their own to some of the French troops.</p> <p>MÉDAILLE D'ITALIE. Authorized by Napoleon III by a decree dated August 11, 1859, to reward all troops who had served in the campaign in Italy. It is a silver medal consisting of a wreath of laurel branches tied at the four points, forming the rim of the</p>
	N U M I S M A T I C N O T E S



Médaille de Sainte-Hélène

84	FRENCH ORDERS
	<p>medal. In the centre is the effigy of the Emperor facing to the left, surrounded by the words <i>NAPOLEON III EMPEREUR</i>. On the reverse are the names of the battles, <i>MONTEBELLO PALESTRO TURBIGO MAGENTA MARIGNAN SOLFERINO</i>, and the legend <i>CAMPAGNE D'ITALIE 1859</i>. The ribbon has red and white stripes, seven of the former and six of the latter.</p> <p>MÉDAILLE DE CHINE. The expedition to China in 1860 was soon followed by a similar reward of service. On January 23, 1861, a decree was issued authorizing this medal. The obverse is similar to the medal for Italy. The reverse bears on the outer edge, <i>EXPEDITION DE CHINE 1860</i>, and in the centre are inscribed the names of the engagements, <i>TA-KOU, CHANG-KIA-WAN PA-LI-KAO PE-KING</i>. The ribbon is yellow, bearing on the face the Chinese characters signifying Pe-King.</p> <p>MÉDAILLE DU MEXIQUE. Following the Expedition to Mexico of 1862-1863, another silver medal was authorized on</p>
	NUMISMATIC NOTES

AND DECORATIONS

85

August 29, 1863. This followed the previous medals as to the obverse. The reverse bears the inscription *EXPEDITION DU MEXIQUE 1862-1863*, and the names of the engagements, *CUMBRES CERRO-BORREGO SAN-LORENZO PUEBLA MEXICO*. The ribbon is white silk with red and green rays, crossed, and surmounted by the Mexican eagle, holding a snake.

MÉDAILLE DE LA GUERRE DE 1870-1871. The Frenchmen who took part in the Franco-Prussian war and served in France and Algeria during the years 1870-1871, received no insignia whatever from their Government to testify to their service until 1911. Just forty years after the Treaty of Peace with Germany, a silver medal was authorized called the *Médaille de la Guerre de 1870-1871*. This was given to all living veterans who had served under the tri-colour in that war. The medal bears on its face the head of the Republic and the words *REPUBLIQUE FRANÇAISE*. On the reverse is a trophy of arms with the inscription *AUX*

AND MONOGRAPHS

86	FRENCH ORDERS
	<p><i>DEFENSEURS DE LA PATRIE</i> on a tablet below, and the date <i>1870-1871</i> above. The ribbon is green and black stripes. The volunteer troops in this war are allowed to wear on the ribbon a bar inscribed <i>Engagé Volontaire</i>.</p> <p>In 1885, and following all other campaigns and expeditions in which the army and navy of France took part, silver medals were authorized. Space would hardly allow all these to be described in detail. They are given below in the order of their issuance:</p> <p>MÉDAILLE DU TONKIN. For the expedition to China and Annam in 1883, 1884 and 1885. On the reverse appear the names of the engagements <i>Sontay, Bac-Ninh, Fou-Tchéou, Formose, Tuyen-Quau, Pescadores</i>. The medal for the men of the Navy, in this campaign has, in addition, the engagement, <i>Cau-Giai</i>, which precedes the others. The ribbon is yellow with four green stripes.</p> <p>MÉDAILLE DE MADAGASCAR. For the expedition of 1885. Ribbon light blue and green, in longitudinal stripes.</p>
	NUMISMATIC NOTES



Médaille de 1870-71

88	FRENCH ORDERS
	<p>MÉDAILLE DU DAHOMEY. For services in that section in 1892. Ribbon yellow and black stripes.</p> <p>MÉDAILLE COLONIALE. For services in Africa and the Colonies. This was authorized in 1893, and many bars were given for the different engagements. The ribbon is light blue, with one wide and two narrow white stripes. Gold bars were given for <i>De l'Atlantique à la mer Rouge</i> (The Marchand expedition), <i>Mission Saharienne</i>, <i>Congo-Gabon</i>, and <i>Centre-Africain</i>. The bars of silver were for <i>Adrar</i>, <i>Afrique occidentale Française</i>, <i>Algérie</i>, <i>Centre-Africain</i>, <i>Cochinchine</i>, <i>Comores</i>, <i>Congo</i>, <i>Côte d'Ivoire</i>, <i>Côte d'Or</i>, <i>Dahomey</i>, <i>Guinée Française</i>, <i>Guyane</i>, <i>Haut-Mékong</i>, <i>Haut-Oubanghi</i>, <i>Iles de la Société</i>, <i>Iles Marquises</i>, <i>Laos et Mékong</i>, <i>Madagascar</i> (the second Campaign), <i>Mauritanie</i>, <i>Nossi-Bé</i>, <i>Nouvelle Calédonie</i>, <i>Sahara</i>, <i>Sénégal et Soudan</i>, <i>Tchad</i>, <i>Tonkin</i>, <i>Tunisie</i> and <i>Maroc</i>.</p> <p>MÉDAILLE DE MADAGASCAR. For the second expedition of 1894-1895, and 1896.</p> <p>MÉDAILLE DE CHINE. For those who took part in the defence of the legations in Peking</p>
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AND DECORATIONS

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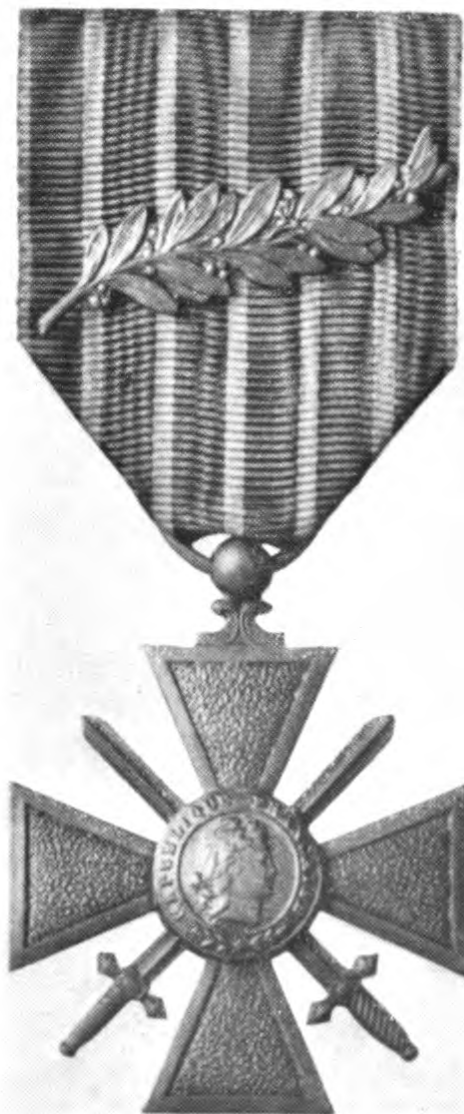
in 1900-1901. Ribbon green and yellow stripes.

MÉDAILLE DU MAROC. Authorized in 1909, for all who took part in the military operation in that country, or in protecting property there. The ribbon for this is similar to the *Médaille Coloniale*, but in green with one wide and two narrow white stripes. The bars given with this medal are for *Casablanca*, *Oudjda*, *Haut-Guir*, *Fez*; and many others have since been added.

CROIX DE GUERRE. By the law of the 8th of April 1915, a bronze cross was authorized to reward Officers and men of all ranks of the army and navy of France and of the Allied forces who were mentioned in despatches. This was called the *Croix de Guerre*. The decoration is a bronze cross with plain edges. The hilts of two crossed swords fill the lower angles; the points, the upper. In the centre medallion is the head of Ceres facing to the right, surrounded by a band inscribed *REPUBLIQUE FRANÇAISE*. On the reverse is the date 1914-1915. In later types, this was changed each year of

AND MONOGRAPHS

90	FRENCH ORDERS
	<p>the war as follows, 1914-1916, 1914-1917, 1914-1918. The ribbon is dark green with seven red stripes, the same as used for the <i>Médaille de Sainte-Hélène</i>.</p> <p>“The different classes of despatches for which a recipient was awarded the Cross may be recognized by the following embellishments attached to the ribbon:</p> <p style="padding-left: 40px;">Army Despatch. Small bronze laurel branch (<i>Palme en bronze</i>).</p> <p style="padding-left: 40px;">Army Corps Despatch. Silver-gilt star.</p> <p style="padding-left: 40px;">Divisional Despatch. Silver star.</p> <p style="padding-left: 40px;">Brigade, Regimental or similar unit Despatch. Bronze star.</p> <p>“Every time a man is mentioned in despatches, he receives a corresponding sign. Thus, a man may wear the Cross with, say, the silver star and the <i>Palmes en bronze</i>. When the ribbon of the <i>Croix de Guerre</i> is worn in undress uniform, the appropriate embellishment in miniature is worn on the ribbon. When a recipient of the <i>Croix de Guerre</i> has been awarded five <i>Palmes en bronze</i> he wears instead a silver <i>Palme</i>.”</p>
	NUMISMATIC NOTES



Croix de Guerre (avec palme)

92	FRENCH ORDERS
	<p>CROIX DE GUERRE DES THÉÂTRES D'OPÉRATIONS EXTÉRIEURES. This decoration was instituted by a decree of April 30, 1921, to reward those of the Army, Navy and civil affairs who had shown exceptional efficiency in their service to the country or its colonies after the signing of the Armistice, especially outside the war zone of France and Belgium. The cross is similar to the <i>Croix de Guerre</i>, except that the reverse medallion has the inscription <i>THÉÂTRES D'OPÉRATIONS EXTÉRIEURES</i>. The ribbon is sky blue edged with broad red bands. The bestowal of this honour carries with it the same privileges as to subsequent citations as does the <i>Croix de Guerre</i> with respect to the wearing of the <i>Palme en bronze</i> or the <i>Étoile d'argent</i>.</p> <p>It ranks with that cross which should be worn immediately following the <i>Médaille Militaire</i>; in case of both, this cross should follow the <i>Croix de Guerre</i> of 1914-1918.</p> <p>MÉDAILLE DE LA GRANDE GUERRE, 1914-1918. In the issue of January 29, 1921, of <i>L'Illustration</i>, Paris, is a represen-</p>
	NUMISMATIC NOTES

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<p>tation of the medal designed by Alexandre Morlon. This was awarded first prize in the competition for the War Medal of the World War. The obverse bears a symbolic head of France, wearing a trench helmet—a modern Minerva, facing to the left. The left hand is holding a sword. Laurel wreaths are on the shoulder. The reverse has in the centre in three lines, <i>GRANDE GUERRE 1914-1918</i>. Around this, with letters resting on an oak and laurel wreath is the inscription <i>REPUBLIQUE FRANÇAISE</i>. The suspension ring or loop is very broad, and attached to the medal by sprigs of laurel. Under the law of June 28, 1920, this Medal is to be awarded to all who served in the Army and Navy between August 2, 1914, and November 11, 1918 including the various organizations working with them.</p> <p>MÉDAILLE DE VICTOIRE. At this writing it has been impossible to obtain a specimen or an authentic description of the Victory Medal of France. Owing to the delay of the authorities in issuing this,</p>	
AND MONOGRAPHS	

94	F R E N C H O R D E R S
	<p>some manufacturers of medals in Paris have issued one, but this is not official.</p> <p>It is of bronze, bearing on the obverse the winged figure of Victory. In her right hand she holds a sword, and in the left hand a laurel branch. On the reverse, across the centre, is inscribed <i>LA GRANDE GUERRE POUR LA CIVILISATION 1914-1918</i> with laurel branches above and below. The rainbow ribbon is adopted as by all the Allies.</p> <p>MÉDAILLE DE LA RECONNAISSANCE FRANÇAISE. One of the most highly prized of the recent Decorations of France was adopted in July, 1917. It is called the <i>Médaille de la Reconnaissance Française</i>. Its purpose was to reward those who had distinguished themselves in acts of devotion to the public interest in the Great War, and for work among the people. At least one year of service is necessary although a few exceptions have been made. It is issued by a decree of the President of the Republic. The medal is of three classes, gold, silver and bronze and is 30 mm. in diameter. On the obverse, an artistic design by Desbois</p>
	N U M I S M A T I C N O T E S



Médaille de Victoire

96	FRENCH ORDERS
	<p>depicts a womanly figure bending over to assist an injured soldier. The reverse is plain, save for a palm branch and the words <i>RECONNAISSANCE FRANÇAISE</i>. The ribbon is 38 mm. wide, of white moiré silk, with blue, white and red stripes each side.</p> <p>This decoration has been conferred on several American and British citizens for their charitable work during the late war, and is considered by some a higher distinction than the <i>Légion d'Honneur</i>.</p> <p>In addition to the foregoing Orders, Decorations and War-medals, there have been many other awards. These have been issued for Education, Life-saving, Service in the Police and Fire Departments, Merchant Marine, and other Government Departments, and conferred chiefly on civilians. They are of gold, silver or bronze, according to the importance of the award. The numismatist, therefore, will have no inconsiderable task in securing specimens of all the French medallic awards.⁷ Most of these are called <i>Médailles d'Honneur</i>. They are as follows:</p>
	NUMISMATIC NOTES



Reconnaissance Française

98	F R E N C H O R D E R S
	<p><i>Médaille des Instituteurs</i> 1818</p> <p><i>Médaille de la Société de Secours Mutuel</i> 1852</p> <p><i>Médaille Coloniale de l'Instruction Primaire</i> 1895</p> <p><i>Médaille de l'Instruction Publique en Indo-Chine</i> 1895</p> <p>Issued by the Ministry of the Interior:</p> <p><i>Médaille d'Honneur de Sauvetage.</i> For acts of courage and devotion. 1815</p> <p><i>Médaille des Épidémies</i> 1885</p> <p><i>Médaille de l'Assistance Publique</i> . . . 1886</p> <p><i>Médaille des Cantonniers Départe- mentaux et Communaux</i> 1898</p> <p><i>Médaille des Sapeurs-Pompiers</i> 1900</p> <p><i>Médaille des Halles et Marchés</i> 1900</p> <p><i>Médaille de la Police Municipale et Rurale</i> 1903</p> <p><i>Médaille des Octrois</i> 1904</p> <p><i>Médaille des Contributions Diverses en Algérie</i> 1907</p> <p>Issued by the Ministry of Foreign Affairs:</p> <p><i>Médaille de Sauvetage</i> 1881</p> <p><i>Médaille pour Services Exceptionnels</i> 1900</p>
	N U M I S M A T I C N O T E S

AND DECORATIONS	99
<p>Issued by the Ministry of Justice: <i>Médaille d'Honneur Pénitentiaire</i> . . . 1896</p> <p>Issued by the Ministry of Finances: <i>Médaille des Douanes</i> 1894 <i>Médaille des Contributions Indirectes</i> 1897</p> <p>Issued by the Ministry of War: <i>Médaille des Épidémies</i> 1892 <i>Médaille du Travail</i> 1888</p> <p>Issued by the Ministry of Marine: <i>Médaille de Sauvetage</i> 1820 (The ribbon when issued to mem- bers of the Naval fleet has an an- chor embroidered thereon.) <i>Médaille du Travail</i> (for those not in the Naval service) 1894 <i>Médaille d'Honneur des Marins du</i> <i>Commerce</i> 1901 <i>Médaille des Épidémies</i> 1909</p> <p>Issued by the Ministry of Public Works: <i>Médaille des Cantonniers et Agents</i> <i>Subalternes</i> 1897 <i>Médaille des Postes et Télégraphes</i> . . 1882</p>	
AND MONOGRAPHS	

100	FRENCH ORDERS
	<p><i>Médailles de Sauvetage</i> 1899 <i>Médaille du Travail</i> 1899</p> <p>Issued by the Ministry of Agriculture: <i>Médaille Forestière</i> 1883 <i>Médaille du Travail</i> 1890</p> <p>Issued by the Ministry of Commerce and Industry: <i>Médaille du Travail</i> 1886 <i>Médaille de l'Exposition Universelle de 1900</i> 1900</p> <p>Issued by the Ministry of the Colonies: <i>Médaille Pénitentiaire Coloniale</i> . . . 1898 <i>Médaille des Douanes et Régies de l'Indo-Chine</i> 1900 <i>Médaille de Sauvetage</i> 1820</p> <p>In addition to the above, similar medals are issued by the Government for services in Algeria.</p> <p>H. Leduc writes in his book <i>Histoire des Décorations en France</i>, p. 125: "Following the instruction of the Grand Chancellor of the Order of the <i>Légion</i></p>
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AND DECORATIONS	. 101
<p><i>d'Honneur</i> for the execution of the ordinance of April 16th, 1824, the only Royal Orders allowed are:</p> <ol style="list-style-type: none"> 1. <i>Saint-Esprit</i> 2. <i>Saint-Michel</i> 3. <i>Saint-Louis</i> 4. <i>Mérite Militaire</i> 5. <i>Légion d'Honneur</i> 6. <i>Saint - Lazare and Notre - Dame - du - Mont-Carmel réunis.</i> <p>“All subjects of the King (Louis XVIII) decorated with one of these Orders must be furnished with <i>brevets</i> or with letters of advice, stating their nomination and signed by the following:</p> <p>For the <i>Saint-Esprit</i>, by the Chancellor of the Order.</p> <p>For the <i>Saint-Michel</i>, by the Ministry of the House of the King.</p> <p>For the <i>Saint-Louis</i> and the <i>Mérite Militaire</i>, by the Ministers of War or Marine.</p> <p>For the <i>Légion d'Honneur</i>, by the Grand Chancellor of the Order.</p>	
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102	FRENCH ORDERS
	<p>For the reunited Orders of <i>Saint-Lazare</i> and <i>Notre-Dame-du-Mont-Carmel</i>, by the Minister of the House of the King.</p> <p>“The last Order has not been conferred since 1788 and is being discontinued.</p> <p>“All others claiming classification among the French Orders, such as those of the <i>Saint-George de Franche-Comté</i>, <i>Saint-Hubert des Ardennes</i>, <i>de Lorraine et du Barrois</i>, <i>du Saint-Sépulcre de Jérusalem</i>, and all others under whatever title or denomination, whether given by Commissions, Chapters, Corporations, Associations, Brotherhoods, Arch-brotherhoods, so-called Grand Masters or their Delegates, Governors of General Administrators, etc., are declared abolished, consequently null, illegal and improper. Those who do not surrender them immediately are subject to penalties under Article 259 of the Penal Code.”</p> <p>Chronological table of other French Orders, which ceased to exist at the time of the Revolution:⁸</p> <p><i>Ordre du Chien et du Coq</i>. Founded by Lisois de Montmorency in 500.</p>
	NUMISMATIC NOTES

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<p><i>Ordre de la Genette.</i> Founded by Charles Martel in 752, after the battle with the Saracens.</p> <p><i>Ordre de la Frise ou de la Couronne Royale.</i> Founded by Charlemagne in 802.</p> <p><i>Ordre de la Machine dite Harfleur.</i> Founded by William the Conqueror, son of Richard, Duke of Normandy, 997.</p> <p><i>Ordre du Lion.</i> Founded by Enguerrand de Coucy in 1080, after having slain a lion.</p> <p><i>Ordre du Saint-Esprit de Montpellier.</i> Founded by Count Guy in 1198.</p> <p><i>Ordre de la Milice de Jésus-Christ.</i> Founded by St. Dominique in 1219.</p> <p><i>Ordre de la Foi de Jésus-Christ.</i> Founded in 1220 to uphold religion.</p> <p><i>Ordre de la Paix.</i> Founded by Ameneus, Archbishop of Auch in 1229.</p> <p><i>Ordre de la Cosse de Genêt.</i> Founded by St. Louis in honour of his son's marriage with Marguerite in 1234.</p> <p><i>Ordre du Croissant.</i> Founded by Charles d'Anjou, brother of St. Louis in 1268 (Lawrence-Archer gives 1448).</p> <p><i>Ordre du Navire et de la Coquille de Mer.</i> Founded by St. Louis in 1269.</p>	
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104	FRENCH ORDERS
	<p><i>Ordre de l'Étoile ou de Notre Dame de la Noble-Maison.</i> Founded by Jean II in 1351.</p> <p><i>Ordre de l'Écu d'Or.</i> Founded by Louis II, Duke of Bourbon in 1369.</p> <p><i>Ordre de Notre-Dame du Chardon ou de Bourbon.</i> Founded by Louis II in 1369.</p> <p><i>Ordre de la Passion de Jésus-Christ.</i> Founded by Charles VI in 1400.</p> <p><i>Ordre des Fous.</i> Founded by Adolphe, Count of Clèves in 1380.</p> <p><i>Ordre de l'Hermine et de l'Épi.</i> Founded by John IV, Duke of Brittany in 1381.</p> <p><i>Ordre de la Couronne.</i> Founded by Enguerand, Comte de Soissons in 1390.</p> <p><i>Ordre de Saint-Georges.</i> Founded by Philibert de Miolans in 1390.</p> <p><i>Ordre du Camail ou du Porc-Épic.</i> Founded by Louis of France, Duke of Orleans, in 1394.</p> <p><i>Ordre de la Colombe ou de la Raison.</i> Founded by Henry III in 1392 or 1399.</p> <p><i>Ordre du Fer d'Or et du Fer d'Argent.</i> Founded in 1414 or 1415 by Jean, Duc de Bourgogne, son of Louis XII.</p>
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<p><i>Ordre des Dames Chevalières de la Cordelière.</i> Founded in 1498 by Anne of Brittany. (Lawrence Archer gives date as 1798.)</p> <p><i>Ordre de la Chapelet de Notre-Dame.</i> Founded in 1520 by the Burgesses of Valenciennes.</p> <p><i>Ordre de la Croix.</i> Founded by Francis I in 1576.</p> <p><i>Ordre de la Charité Chrétienne.</i> Founded by Henry III in 1589.</p> <p><i>Ordre du Cordon Jaune.</i> Founded by the Duc de Nevers in 1600.</p> <p><i>Ordre de la Madeleine.</i> Projected by Jean Chemel in 1614.</p> <p><i>Ordre de Saint-Jacques de Haut-pas ou de Lucques.</i> Founded in 1672.</p> <p><i>Ordre de l'Étoile de Notre-Dame.</i> Founded by Aniaba, a pretending King of Eiszinie (Africa), in 1701.</p> <p><i>Ordre de la Mouche à Miel.</i> Founded by Louis-Bénédictine de Bourbon in 1703.</p> <p><i>Ordre du Pavillon.</i> Founded by Louis XV in 1717 when eight years of age, for the young men of the Court.</p> <p><i>Ordre de la Constance.</i> Founded by various nobles in 1770.</p>	
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NOTES

1. *The Order of the Hospital of St. John of Jerusalem*, by H. W. Fincham, London, 1915, p. 7. The decoration illustrated on Pl. II is the type for Savoy. The French Cross omits the fillet and shield.

2. Catalogue, *Musée de l'Armée*, p. 219. Plate III illustrates the Spanish form of this decoration. In France the trophy is replaced by a crown.

3. *Histoire des Décorations en France*, by H. Leduc, pp. 11-12

4. *L'Etoile de la Légion d'Honneur*, by F. A. Rigault, pp. 15-16.

5. Catalogue, *Musée de l'Armée*, Paris, 1912, p. 25.

6. *Ribbons and Medals*, by Commander H. Taprell Dorling, R. N., London, 1919, p. 75.

7. *Les Décorations Françaises 1912*, by Jules Martin, p. 79.

8. *Histoire des Décorations en France*, by H. Leduc, p. 125.

Ordres de Chevalerie, by A.-M. Perrot, p. 261.

The Orders of Chivalry, by Major J. H. Lawrence-Archer, p. 323.

9. Previous to Louis Philippe's coming to the throne, there were fleur-de-lis in the angles of the cross. The removal was a concession to the passion of the revolutionists for equality.

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No. 12



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By HOWLAND WOOD

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NUMISMATIC NOTES & MONOGRAPHS

EDITOR: SYDNEY P. NOE

NUMISMATIC NOTES AND MONOGRAPHS is devoted to essays and treatises on subjects relating to coins, paper money, medals and decorations, and is uniform with Hispanic Notes and Monographs published by the Hispanic Society of America, and with Indian Notes and Monographs issued by the Museum of the American Indian-Heye Foundation.

THE GOLD DOLLARS OF 1858

WITH NOTES OF THE OTHER ISSUES

BY
HOWLAND WOOD



THE AMERICAN NUMISMATIC SOCIETY
BROADWAY AT 156TH STREET
NEW YORK
1922

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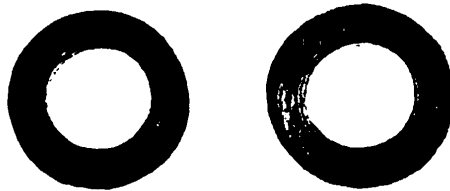
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	I
<p>THE GOLD DOLLARS OF 1858</p> <p>With Notes of the Other Issues</p> <p>By Howland Wood</p> <p>A number of years ago one of our old-time collectors told his son that there was a rare variety of the 1858 gold dollar with the word "<i>Dollar</i>" much larger than on the ordinary specimens. While examining some United States proof sets at an auction sale years before, he had noticed this peculiarity, but through inappreciation of its rarity at that time he failed to get it. The son was an enthusiastic collector and though constantly on the watch for this variety was never able to locate a specimen. Other collectors have been on the lookout for this piece, but so far as known they have failed in their quest.</p>	
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	<p>The piece under consideration was for many years in the possession of Mr. J. C. Randall of Philadelphia. It was probably included in lot 472, a proof set of 1858, sold with some of his other coins by Cogan on March 29th, 1882.</p> <p>Whether the late Ben G. Green saw one of these coins it is impossible to prove, but in his Numismatic Reference and Check Book published in 1902 he lists under the Gold Dollars of 1858 the second one as follows: "large 1 Dollar." This statement of Mr. Green's seems to have remained unnoticed by most collectors.</p> <p>The American Numismatic Society has in its possession one of these gold dollars. Possibly it is the identical Randall specimen. This piece formed part of the collection of United States Gold and Silver Coins presented to the Society in 1908 by the late J. Pierpont Morgan and it was listed as "Rare" in the inventory of the collection. The piece differs in many respects from the regular issues as will be seen from the illustration. The letters of the legend on</p>
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<p>the obverse are larger and the head is set lower in the field. The "1" on the reverse is of different shape and the word "DOLLAR" is in much higher letters. The rims around the edge are a trifle broader. It is a pattern coin in the strict sense of the word. Designed to test out the advisability of making the inscriptions more legible, it failed to do this and consequently was not adopted. One or more of these pieces may have found their way into the proof sets of that year, but none, or apparently extremely few, reached the hands of collectors of pattern coins. This particular variety is only known otherwise by a few examples struck in copper.</p> <p>The gold dollar came into existence in 1849 by Act of Congress on March 3rd of the same year, together with the twenty dollar gold piece, though the latter was not struck for circulation until the following year. The gold dollar was discontinued in 1889, and the Act to abolish it was passed September 26th, 1890.</p> <p>It is interesting to note that the first pattern for a gold dollar is dated 1836 when</p>	
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	<div></div> <p>the Gobrecht silver-dollar patterns were made in anticipation of the resumption of striking silver dollars. This first pattern for a gold piece has a liberty cap in a rayed circle, and the denomination 1 D, in a closed wreath on the reverse side.</p> <p>An interesting gold pattern, struck in 1849, has a square hole in the centre.</p> <p>In 1852 the so-called ring dollars were made by way of experiment.</p> <div></div>
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<p>William Barker in 1872 made a new design for all denominations of the gold and silver coinage, and specimen pieces were struck in various metals. These designs were not adopted.</p> <p>Of the regular gold dollars there are several minor varieties of the year 1849, differing in the size of the stars, lettering and the wreath. This style with the coronet head continued into 1854 when a new design on a larger flan appeared. This design with a feathered head-dress was struck in 1854 and 1855. In 1856 the head was made slightly larger and the head-dress changed in a few minor details. The design continued unchanged up to the cessation of the gold-dollar coinage.</p> <p>Gold dollars were struck at the Philadelphia Mint from the inception until 1889, and in the branch mints as follows:</p> <p>New Orleans, with mint mark O, from 1849 to 1853 inclusive, and 1855.</p> <p>Dahlonga, Ga., with mint mark D, from 1849 into 1861 (when the mint was closed).</p> <p>Charlotte, N. C., with mint mark C, from 1849 to 1855 inclusive, 1857 and 1859.</p>	
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6	G O L D D O L L A R S
	<p>Pieces dated 1854 are unknown to collectors. The records state that only four were struck.</p> <p>San Francisco, with mint mark S, bearing dates 1854, 1856 to 1860 inclusive, and 1870.</p> <p>Besides the regular issues, various commemorative gold dollars have been struck. These were authorized by Congress and have been sold at double and sometimes treble their face value to aid, for the most part, expositions.</p> <p>1903 Louisiana Purchase Exposition with portrait of McKinley.</p> <p>1903 Louisiana Purchase Exposition with portrait of Jefferson.</p> <p>1904 and 1905 Lewis-Clark Exposition with portrait on the obverse of Lewis; and on the other side, of Clark.</p> <p>1915 Panama-Pacific Exposition with head representing Labor, by Charles Keck. Struck at the San Francisco Mint.</p> <p>1916 and 1917 McKinley Birthplace Memorial; Niles, Ohio, with portrait of McKinley on one side and the Memorial building on the other.</p> <p>1922 Grant Memorial Gold Dollar.</p>
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<p>There are a number of gold dollars, made chiefly in California, but as they have no official status they are not included. For the most part they can be easily distinguished from the genuine pieces by their poor workmanship as well as by their inscriptions and designs.</p>	
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GOLD DOLLARS 1858

Pl. I



First Type 1849-54



Second Type 1854 and 1855



Third Type 1856-1889



Second Variety of 1858

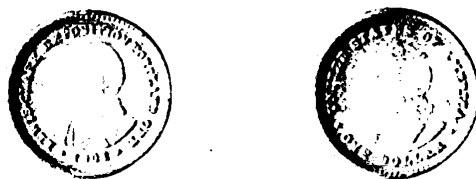
TYPES OF GOLD DOLLARS
FOR CIRCULATION

GOLD DOLLARS 1858

Pl. II



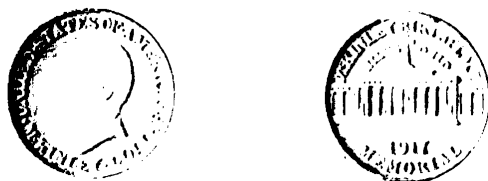
Louisiana Purchase Exposition



Lewis-Clark Exposition



Panama-Pacific Exposition



McKinley Birthplace Memorial

COMMEMORATIVE
GOLD DOLLARS

PUBLICATIONS

Ernest Babelon. *Les Médailles Historiques du Règne de Napoléon le Grand, Empereur et Roi.* Paris. 1912. Folio, lx, 430 pages printed in three tones, a special border for every page. Illustrating two hundred unpublished drawings of Napoleonic medals, by Chaudet and Lemot for the French Institute. \$20.00.

Agnes Baldwin. *The Electrum Coinage of Lampsakos.* 1914. 36 pages. 2 plates. \$1.00.

Edward T. Newell. *The Seleucid Mint of Antioch.* 1918. 137 pages. 13 plates. \$5.00.

Edward T. Newell. *Tarsos under Alexander.* 1919. 47 pages. 8 plates. \$2.50.

Edward T. Newell. *Some Rare or Unpublished Greek Coins.* 12 pages. 2 plates. \$1.00.

Edgar H. Adams. *Private Gold Coinage of California.* 5 Vols. (Unbound.) \$3.50.

Edgar H. Adams and William H. Woodin. *United States Pattern, Trial and Experimental Pieces issued by the U. S. Mint from 1792 up to the present time.* 1913. 204 pages. Illus. Cloth, \$3.00.

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47 pp. 6 pl. 50c.
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1921. 25 pp. 2 pl. 50c.
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Introduction and Kyparissia Hoard
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Coinage, 1913-1916. 1921. 44
pp. 26 pl. \$2.00.
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NUMISMATIC NOTES AND MONOGRAPHS

No. 13



THE PRE-MOHAMMEDAN COINAGE OF NORTHWESTERN INDIA

By R. B. WHITEHEAD

THE AMERICAN NUMISMATIC SOCIETY
BROADWAY AT 156TH STREET
NEW YORK
1922

PUBLICATIONS

The American Journal of Numismatics, 1866-1920.

Monthly, May, 1866-April, 1870.
Quarterly, July, 1870-October, 1912.
Annual, 1913-1920.

With many plates, illustrations, maps and tables. Less than a dozen complete sets of the Journal remain on hand. Prices on application. Those wishing to fill broken sets can secure most of the needed volumes separately. An index to the first 50 volumes has been issued as part of Volume 51. It may also be purchased as a reprint for \$3.00.

The American Numismatic Society. Catalogue of the International Exhibition of Contemporary Medals. March, 1910. New and revised edition. New York. 1911. xxxvi, 412 pages, 512 illustrations. \$10.00.

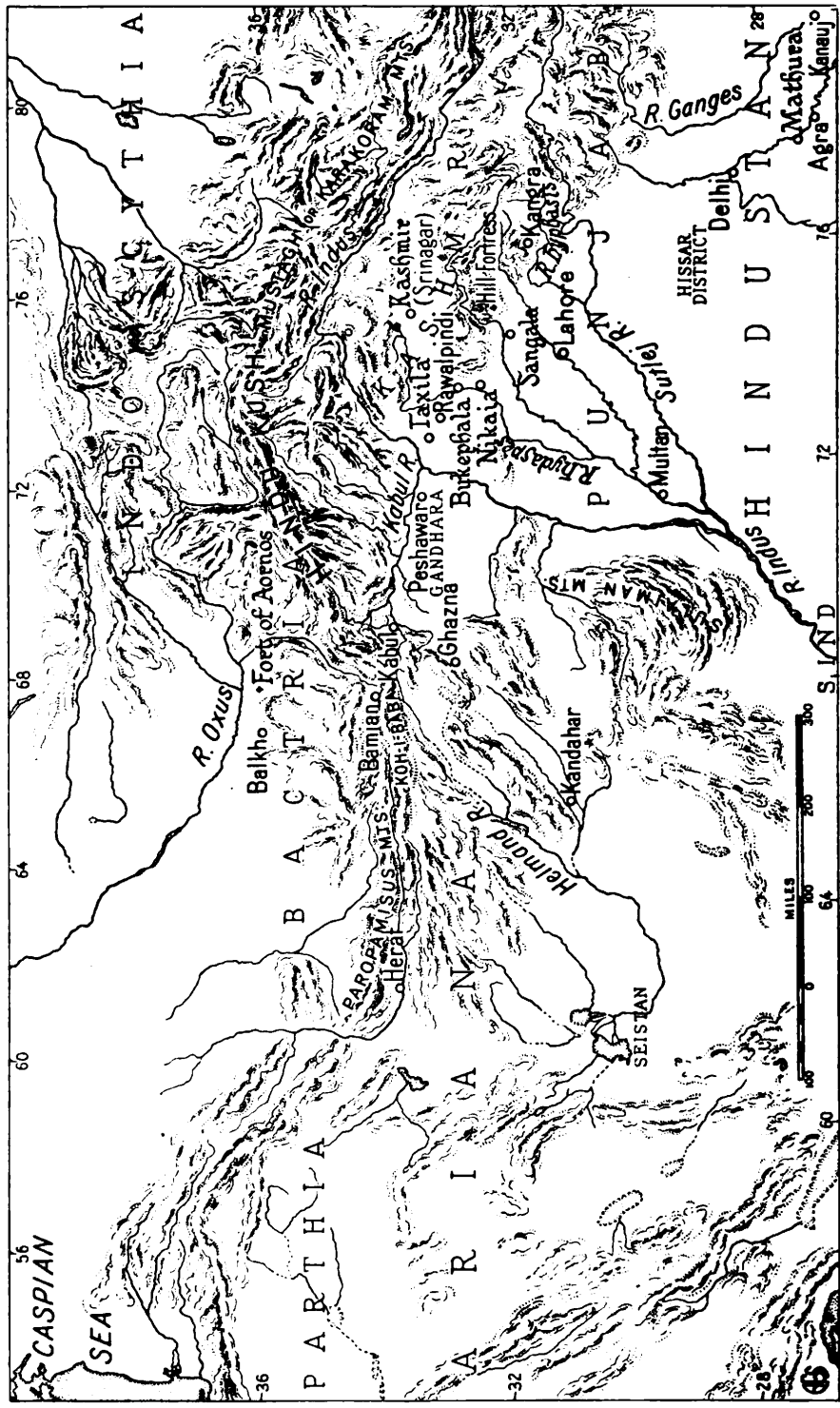
The American Numismatic Society. Exhibition of United States and Colonial Coins. 1914. vii, 134 pages, 40 plates. \$1.00.

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R. B. WHITEHEAD

Bootle

Cumberland

	I
<p>PRE-MOHAMMEDAN COINAGE OF NORTHWESTERN INDIA</p> <p>BY R. B. WHITEHEAD</p> <p>It has been laid down as a general rule that coins cannot be considered of primary importance as historical evidence. Their chief uses are to check the statements of contemporary writers and to fill in details; they rarely make history. In the early periods of a nation's history, when evidence from coins is of the greatest value, it is generally meagre. In later periods when inscriptions on coins are fuller and more illuminating, we have a variety of other sources, so that the evidence of coins naturally occupies a subordinate position. On the other hand, we do not hesitate to accept the as-</p>	
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	<p>sertions of coins, because money always mirrors current events. Even when the reflections are distorted, their very untruthfulness not infrequently affords valuable information.</p> <p>Apart from actual statements, coins supply historical material in a variety of indirect ways. For instance, since gold coins of the Greeks and Scythians in India are practically unknown, while the gold currency of the Kushans is extensive, we are free to conclude that gold for some reason had become abundant after the downfall of the Greek power</p> <p>Coins have indirectly proved of the highest value to the archæologist, for the finding of coins along with statues and inscriptions, where the latter are undated, gives a clue to the period at which they were produced. Such finds have shown that Græco-Buddhist statues of the best period of the Gandhara school which is splendidly exemplified in the Punjab Museum, Lahore, were contemporary with the Kushan king, Kanishka. Again, coins present us with a continuous series</p>
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<p>of documents illustrating the development of the artistic designs which embellish them, and of the scripts in which the superscriptions are written. For these reasons they are of material interest to the artist and to the epigraphist. In addition to facts, coins are fruitful of surmise. The perils of such surmising are perhaps illustrated in the attempts made to unravel the mutual relationships of the various members of the Indo-Bactrian, Scythian and Parthian dynasties. Still, such deductions, if free from fancy, cannot be far away from the truth and in certain periods of early Indian history we have to be content with conjecture. So much for a general consideration of the Muse of history and her numismatic handmaid.</p> <p>Now let us turn to Indian history and numismatics. My present paper deals with the monetary issues of the early foreign invaders—Greeks, Scythians, Parthians, Kushans and Ephthalites—and with the indigenous pieces from the earliest times down to the Mohammedan</p>	
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4	P R E - M O H A M M E D A N
	<p>invasion which are found in Northwest India—especially the Punjab, in which province I have served for seventeen years as a member of the Indian Civil Service. I propose to contribute a second paper which will deal with the coins of the Punjab from the Mohammedan conquest down to the present day.</p> <p>The term “Indo-Greek” is adopted as a general appellation for the monetary issues of the Greek invaders of India and their immediate successors with whom Greek culture, as revealed by their coins, was still a living force. For convenience I also include the issues of the Bactrian Greeks just prior to the invasion of India. I propose to distinguish the Greek invaders of India by the name “Indo-Bactrian.” Then come the issues of what are conventionally termed the Indo-Scythians, Indo-Parthians and Great Kushans down to and including the better executed coins of Vasu Deva. The Bactrians and Indo-Bactrians overlap as some of the Greek kings struck money of both types.</p>
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In his preface to the British Museum Catalogue of the Coins of the Greek and Scythic Kings of Bactria and India, Mr. Stuart Poole remarked that few fields of numismatics offer richer material, historical, archæological and even philological. To a very large extent these contemporary documents in metal are the only testimonies to a period which would otherwise have disappeared from history. There are a few meagre notices by historians of the Bactrian kings Diodotos, Euthydemus, Demetrios and Eukratides. We are also informed that Heliokles was the last king of Bactria. He was overthrown by an irruption of savage tribes from the steppes of Central Asia, and the Greeks who had crossed to the Indian side of the Hindu-Kush were completely cut off from European civilization. The names of Menander and Apollodotos are just mentioned by classical annalists, but those of the numerous other Indo-Bactrian princes are only found on their coins, and till fourteen years ago no other evidence of their existence was known.

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	<p>But we now have the Brahmi inscription at Besnagar in the Gwalior State, which relates that the pillar on which it is inscribed was erected by Heliodoros, son of Dion, a subject of the great king Antialkidas of Taxila. This is one of the many remarkable discoveries made in recent years by the Archæological Department of India.</p> <p>The historical importance of the coins now being discussed is not confined to the issues of the Greek princes. Our knowledge of the so-called Indo-Scythians, Indo-Parthians and Great Kushans is almost entirely derived from the study of the coins. The Indo-Parthian pieces give us the name of Gondophares, known to Christian tradition as the Indian ruler under whom the Apostle Saint Thomas suffered martyrdom. One of the Kushan rulers is Kanishka, the famous convener of the fourth great Buddhist Council, the body whose deliberations gave consistency and official sanction to the doctrines of Northern Buddhism. As regards the philological importance of the Indo-</p>
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Bactrian coins, it must not be forgotten that they provided the key to the Kharoshthi or Bactrian Pali script. Until their discovery the edicts engraved in this script on the pillars and rocks by the Mauryan king Asoka could not be deciphered because they were written in unknown characters. The Indo-Bactrian pieces are bilingual and were the "Rosetta stone" by means of which the Asoka edicts were unravelled. Many documents written in the Kharoshthi character have been recently discovered by Sir Aurel Stein in Chinese Turkestan. A further interest lies in the shape of these coins, many of them being square or oblong, and in the characteristic designs of gods and animals as conceived by the oriental Greek artist.

A rapid sketch of the numismatic history of the various dynasties is now in order. In the summer of B. C. 334, Alexander the Great crossed the Hellespont at the head of thirty thousand infantry and four thousand five hundred cavalry. He forced the passage of the

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	<p>Persian frontier and afterwards defeated the Persian monarch Darius in two decisive battles at Issus and Arbela. The death of Darius in B. C. 330 was followed by a revolt of the Persian governors of what is now Western Afghanistan, and the rebellion of these eastern satraps showed Alexander that resistance had not died with the decease of the monarch. His first plans were probably confined to the humiliation of Persia, but they seem gradually to have been enlarged with success until they embraced the complete subjugation of the Persian empire and the conquest of India even to the mouth of the Ganges.</p> <p>Alexander's comprehensive mind contemplated much more than a predatory excursion resulting only in plunder. When he determined on the conquest of Bactria and India, he had also formed plans for their permanent occupation and future government. This he purposed to effect by securing the goodwill of his subjects. By the year 328 he had crushed the rebellious Persian satraps and had</p>
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carried his arms over the River Oxus into Bactria. Early in the following spring, Alexander crossed the Indian Caucasus (Hindu Kush). He spent the remainder of the year 327 in the reduction of the various cities and strongholds of the Kabul valley, ending with the capture of the famous rock-fort of Aornos. In the spring of B. C. 326 he crossed the River Indus at Ohind and marched to Taxila (now known as Shahdheri), twenty miles northwest of Rawalpini, where he was hospitably received by the Indian king whose capital it was. From Taxila Alexander advanced to the River Hydaspes (Jhelum) where he was so stoutly opposed by the Indian monarch Porus that he could only pass the river by a stratagem. Then followed a great battle between the Greeks and Indians, the submission of Porus and the foundation of the cities of Nikaia and Bukephala. Next came the capture of the hill-fortress of Sangala and the advance to the River Hyphasis (Beas) beyond which the Greek army, dispirited by	
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	<p>long marches and the warlike character of the people, refused to proceed.</p> <p>There, says Gibbon, on the eastern bank of the Hyphasis, on the verge of the desert, the Macedonian hero halted and wept. He erected twelve huge altars dedicated to the principal deities of Greece and then retraced his steps to the banks of the Hydaspes, where he prepared a fleet to convey his army to the sea. After various adventures he reached the Indian Ocean about the middle of B. C. 325. The Greek fleet coasted round to the Persian Gulf while Alexander himself made a long and harassing march through the desert hinterland of the Arabian Sea to Persepolis and Babylon. He died at Babylon shortly after his arrival in B. C. 323.</p> <p>The chief provinces of Alexander's empire were apportioned to his leading officers. The eastern provinces were Bactriana, Ariana, and India, or the countries watered by the Rivers Oxus, Helmund and Indus, respectively. India comprised the three satrapies of the</p>
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II

Parapamisadæ (Kabul Valley), the Punjab and Sind. Out of the confusion which followed Alexander's death, Seleukos, satrap of Babylon, emerged as the predominant ruler of Bactriana and Ariana, but was not successful in his expedition against Chandragupta Maurya, king of India, known to the Greeks as Sandrokkottos. By the resulting treaty, about 305 B. C., the Kabul Valley, the Punjab and Sind were added to the dominions of Chandragupta, and Bactriana became the most easterly province of the kingdom of Seleukos. The pact thus made between the Indians and the Greeks was cemented by the residence of Megasthenes, ambassador of Seleukos at the Indian Court. To Megasthenes and his successor the ancient Greeks and Romans were indebted for nearly all their knowledge of the Indian territory.

It is clear, therefore, that Alexander's settlements in India, whatever they may have been, had disappeared within twenty years of his death and we have no reason to believe that his rapid march through

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	<p>the Punjab left anything permanent behind it. No trace of his twelve altars has ever been discovered, which is not surprising considering the great changes which have taken place in the courses of the Punjab rivers during the last two thousand years. It is extremely doubtful that Alexander struck coins in India. However, a second Greek invasion of the Kabul Valley and India was to take place with more durable consequences.</p> <p>Seleukos was assassinated in B. C. 280 and was succeeded by his son Antiochos Soter. Antiochos II, surnamed Theos, followed his father Antiochos Soter in B. C. 261 and commenced hostilities against Egypt. The eastern provinces of the Syrian empire, Bactria and Parthia, seized this opportunity to cast off a yoke which had become little more than nominal. The details of this revolt are obscure, but it resulted in the establishment of a remarkable offshoot of Hellenic colonial enterprise in the heart of Asia. Bactria had greatly increased in strength as the result of fifty years of almost con-</p>
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<p>tinuous peace, and its governor Diodotos assumed independent power. At about the same time a Parthian named Arsakes succeeded in setting up a separate State and launched Parthia on its great career as the rival not only of Bactria and Syria but ultimately of Rome. These important events are assigned to the year 250 B. C. Diodotos struck coins in his own name, with a design of the thundering Zeus, and assumed the title Soter, meaning saviour or protector. This title, if it had any special significance, may have referred to the part played by Bactria in protecting the eastern flank of the Hellenic world from the barbarians of Central Asia. He was probably succeeded by his son of the same name, and this second Diodotos fell a victim to the conspiracy headed by one Euthydemus, who appears to have taken effectual means to prevent any of the rival family from disputing his retention of power. Under Euthydemus, Bactria attained the summit of its prosperity. About 209 B. C. he successfully resisted a</p>	
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	<p>formidable invasion by Bactria's former suzerain, Antiochos III, the king of Syria. Subsequently he carried the Bactrian arms over the Hindu Kush into the Kabul Valley. Doubtless his son Demetrios took a prominent part in these military operations. The demeanor of Demetrios as a youth had won the regard of Antiochos; his exploits as a man pushed the Greek dominion in the East well over the Indian border. The story of Demetrios must have been preserved down to a very late period, as Chaucer refers to the "grete Emetreus, king of Inde," in the Knight's Tale.</p> <p>Euthydemos figures on several fine coins as a man in the prime of life with a stern and heavy face. The seated Herakles is the usual design on the reverse of the gold and silver coins, while a prancing horse figures on the copper pieces—possibly a reference to Balkh, the capital of Bactria, the city of the horse.</p> <p>Demetrios must have acceded to the throne about 190 B. C. There is reason</p>
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<p>to believe that he extended the Greek conquests to the Delta of the Indus, but his coins are seldom if ever found east of the Indus. The best known issue of Demetrios is the series which represents the king wearing an elephant's scalp head-dress; these coins are purely Attic in design and weight. Demetrios, like Euthydemos, seems to have adopted Herakles as his patron deity. Herakles, the Hercules of the Romans, was the most celebrated of the heroes of classical antiquity. He was the apotheosis of rude strength and valor. His weapons were the club and the bow and arrow; his most frequent attributes are the club and lion-skin. He was a great traveller and is said to have reached India, an exploit which is also attributed to Dionysos, the god of vegetation and the giver of wine and alcoholic pleasures. In new lands reached by the Greeks, some local hero or divinity who represented strength of body and mighty deeds would be identified with Herakles, hence his prominence on Indo-Greek coins.</p>	
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	<p>Three obscure princes who were approximately contemporary with, and possibly subordinate to Diodotos and Euthydemos, were . Antimachos Theos, Pantaleon and Agathokles. Agathokles struck a very interesting and excessively rare series of silver medallions, which bear his name on the reverse side, but on the obverse give the portraits and names of Alexander, Diodotos, Euthydemos and Antiochos Nikator. It is clear that he is claiming relationship with them or acknowledging their suzerainty, but history affords us not a single hint on which we might base an account of what must have been a chequered career. These coins present three conceptions of Zeus, first, the god enthroned bearing an eagle on his outstretched right hand; then as an avenging deity shielded by the ægis and brandishing a thunderbolt; and thirdly, in an erect position carrying the three-headed Hecate on his right hand.</p> <p>Zeus, the greatest of the Greek deities, the father and king of gods and of men, was primarily the god of the sky and is</p>
	NUMISMATIC NOTES

represented in Art as the ideal of ripe manhood, a mature figure with wavy hair and shaggy beard. The attributes of Zeus are the sceptre, eagle, thunderbolt, and sometimes the figure of Nike on his outstretched hand. Kings and queens as depicted on the coins always wear the royal diadem. This was originally the blue and white band tied round the tiara of the Persian monarchs and was the old Asiatic symbol of royalty. It later took the form of a white silk ribbon sometimes embroidered with pearls.

It was probably while Demetrios was fighting on the Indian side of the Hindu Kush that his authority in Bactria was undermined by a rival named Eukratides who appears to have been some connection of the royal house of Seleukos and who eventually was able to usurp the regal authority in Bactria. This happened about the year 175 B. C. In the end Eukratides emerged triumphant from the struggle with Demetrios, who is held to have perished or to have been deposed about 160 B. C.

18	P R E - M O H A M M E D A N
	<p>The extension of the Greek dominion to the south of the Hindu Kush is reflected in the coinage of Demetrios, who is the first of the Bactrian Greeks to strike money on the Indian weight-standard with an inscription in the Indian vernacular (now called Kharoshthi), in addition to the Greek legend; the one legend being a literal translation of the other. There are one or two very scarce bilingual copper coins of Demetrios of the characteristic Indian square shape, and I possess an Indian tetradrachm not yet published.</p> <p>The money of Eukratides has been found abundantly, both the pure Greek kind current in Bactria proper and the Indian bilingual class struck for use on the Indian side of the Hindu Kush. The earliest issues of Eukratides bear the image of Apollo. Apollo was one of the chief divinities of Greece, the god of sunshine and light, lord of oracles and prophecy, of music and poetry, and the ideal of manly youth and beauty. His attributes were the bow and arrow and</p>
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the tripod-lebes, a three-footed stool bearing the lebes or cauldron for burning incense. The most characteristic issues of Eukratides are the splendid tetradrachms with the triumphant design of the mounted Dioskouroi, the great twin brethren, sons of Zeus. Their principal function was that of divine protectors and aiders of mankind, more especially travellers by sea, and their stars appeared above the ship of the voyager as a sure sign of help. They are shown on coins either mounted or on foot, and carry palms of victory and lances. Their distinctive dress was the chlamys and the pilos. The chlamys originated as a rider's cloak worn over armour, a short light mantle clasping at the neck. The pilos was a conical cap of felt or leather worn by artisans and fisher folk. Some seventy years ago a sensation was caused in the numismatic world by the discovery of a gold twenty-stater piece of this type. That magnificent coin was purchased for the French National Collection and may be seen in the Bibliothèque Nationale.

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	<p>It is the largest surviving gold coin of ancient times, is still unique and is a fitting token of Bactrian wealth and power.</p> <p>The Roman historian Justin tells us that Eukratides while returning from India was murdered by his own son. The name of the parricide is not recorded. This event is assigned to the year 150 B. C. Some authorities have identified the murderer with Heliokles, some with Apollodotos. Be that as it may, the removal of the strong hand was followed by the rise of a number of princelings probably belonging to the rival houses of Eukratides and Euthydemus, who constantly fought amongst themselves and whose civil wars hastened the dissolution of the Bactrian monarchy. Heliokles and Antialkidas are the last kings to strike money of the Attic standard and design. It is therefore safe to assume that with them passed away the Greek authority over Bactria, and that after their time the Greek power was limited to the Kabul Valley and the Northwest</p>
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Punjab. Bactria was overrun by an irruption of nomadic tribes who are known as Saka Scythians, and the Greeks south of the Hindu Kush were completely cut off and are heard of no more. Positively all that history has to tell us of the Indo-Bactrians consists of two casual references to Apollodotos and Menander. I have already stated that the Besnagar pillar inscription, discovered in 1907, is the only known inscription containing a reference to any Bactrian or Indo-Bactrian king. Excavations at Balkh would probably give invaluable results, but at the present time Balkh is inaccessible for the European investigator. We have reason to believe that the Sakas were an involuntary vanguard thrust over the Bactrian frontier by the pressure of other obscure hordes on the Mongolian plains who were destined to overwhelm and replace both Greeks and Sakas in Afghanistan and Northwestern India. I shall briefly allude to these developments after tarrying a few moments with the declining fortunes of the Greeks.

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	<p>The death of Eukratides was speedily followed by the extinction of the Greek power in Bactria, Heliokles being held to be the last Greek king of Bactria and India. The coins, however, show that a king named Antialkidas, who was probably later than Heliokles, struck money of both Bactrian and Indo-Bactrian types. After the time of Heliokles and Antialkidas, Greek rule was confined to the Indian side of the Hindu Kush, and the Greek dominions appear to have split up into a number of petty states which were generally in a chronic state of war amongst themselves. Sir Alexander Cunningham held that only thirty years elapsed between the death of Heliokles and the end of the Greek rule in India under the last Greek king, Hermaios. Mr. Vincent Smith says one hundred and eighty years. The latest and best informed opinion, that of Professor E. J. Rapson, places the death of Eukratides about 150 B. C. and the downfall of Hermaios about 20 A. D.</p> <p>We have to fit into this period the</p>
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reigns of some twenty-five Greek princes whose names, with the exception of Apollodotos and Menander, are known from their coins only, which, of course, are all of the bilingual Indo-Bactrian types and weights. The slight progressive degradation of design and workmanship combined with the knowledge of the find-spots and such minor details as the comparative abundance or scarcity of the coins of each king, form the sole evidence which the ravages of time have spared to tax the constructive ingenuity of the modern investigator. Menander (apparently the Milinda of the Buddhist records) is the only Bactrian king after Eukratides of whom contemporary records tell us anything. He probably reigned at Sagala, possibly the modern Punjab town of Sialkot, from about 160 to 130 B. C., and seems to have united the entire Greek power in India under himself. He succeeded in the reconquest of the Indian kingdom of Demetrios—the Northwest Punjab, Kabul Valley and Sind—and may have carried the Greek	
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	<p>arms in raiding expeditions down the Ganges valley to Patna. His conversion to Buddhism is a moot question, but there can be no doubt that Buddhism exercised a great power over the early invaders of India, as we shall see in the case of the Kushan emperor, Kanishka. The death of Menander seems to have been followed by a general scramble for power. About the same time the Hindu princes must have driven the Greeks back from Menander's outlying territories in the Punjab plains. A gradual decline ended in the downfall of the last Greek king, Hermaios.</p> <p>The coins of Apollodotos, as we should expect from his name, are largely devoted to the cult of Apollo. But the silver issues usually bear the image of Athene with Ægis and thunderbolt. She was one of the principal Greek deities, personifying to them the guiding influence of life in counsel, industry and strategy of war. Her poetical name was Pallas. As the patron goddess of Athens she was regarded as representing the pre-eminence</p>
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of the Greek genius in art, literature and science. Her special attribute was the ægis, a goat skin plated with scales in which is set the head of Medusa. The companion or symbol of the goddess was the owl.

Gold coins of the Bactrian Greeks are extremely scarce and of the Indo-Bactrians are absolutely unknown. I have already mentioned the unique twenty-stater piece of Eukratides. The only other gold coin of Eukratides known to me is the stater now in the cabinet of Mr. E. T. Newell, President of the American Numismatic Society. Indo-Bactrian silver coins are found in the tetradrachm and drachm sizes, considerably smaller than the corresponding Bactrian denominations which are on the Attic scale.

As a rule the tetradrachms are extremely rare. For example, when I wrote my Punjab Museum Catalogue (1914) I knew of only one Indian tetradrachm of Heliokles, one of Strato and Agathokleis, three of Archebios, one of Amyntas, four of Antialkidas. They are comparatively

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	<p>abundant for Menander, Hippostratos and Hermaios. The usual size is the drachm. Polyxenos is known from one silver and one copper coin (both in the Punjab Museum); Telephos from three silver and half a dozen copper coins; Peukolaos from two silver and three or four copper; Theophilos from one silver and half a score copper; Apollophanes from a dozen silver. Several other princes are almost as rare. There is no reason why new names should not be found. One or two drachm issues are square, but the tetradrachms are invariably round. The copper coins are usually square or rectangular. Kingly titles commonly found are <i>Soter</i>, protector; <i>Dikaios</i>, just; <i>Aniketos</i>, invincible; <i>Nikephoros</i>, victory-bearing. As regards the Kharoshthi language, I may just mention that <i>Basileos</i> translates into <i>Maharajasa</i>, <i>Dikaiou</i> into <i>Dhramikasa</i> and <i>Nikephorou</i> into <i>Jayadharasa</i>; in these three words the familiar <i>Maharaja</i>, <i>Dharma</i> (right) and <i>Jai</i> (victory) are plainly to be seen. The Greek monogram</p>
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may denote the name of the local magistrate under whose authority the coin was struck, or sometimes the mint.

We know that Hermaios was the last of the Indo-Bactrian kings because there is a class of coins which bears two names, that of Hermaios in the Greek legend, and Kujula Kadphises in the Kharoshthi. This inference is definitely proved by the disappearance of the name of Hermaios from the coinage, its place being taken by that of the Kushan conqueror Kujula Kadphises in the Greek legend without alteration in the type, although modern research does not admit that Kujula Kadphises was necessarily the immediate barbarian successor of Hermaios. Thus ended the Greek dominion in Bactria and India after a brilliant career of at least one hundred and fifty years from the establishment of the independent kingdom of Bactria by Diodotos in the year 250 B. C. But though the political power of the Greeks had disappeared, yet Greek culture and civilization survived for another century

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	<p>or so, as shown by the coins of the Indo-Scythian sovereigns Vonones, Moas and their successors, as well as by the great Kushan conqueror Kujula Kadphises and his dynasty.</p> <p>I should like to interject a few general remarks on these Greek coins. They are beautiful, interesting, rare, and of great value to the historian. They possess all the qualities necessary to attract and stimulate attention. I suppose I should never have become a coin collector but for the fact that in the early part of my service in the Punjab I saw two Indo-Bactrian coins which had been found in my own District. It is possible for a collector fortunately situated, in Peshawar for instance, to acquire a fair number of the commoner kinds of these coins from the bazaars alone. But the modern collector, however well placed, will not make a good collection without recourse to professional agents. He will find that the Bactrian series has been very extensively forged. What a pity it is that the modern collector cannot wander about Kabul</p>
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and the Kabul Valley in the happy way that the American pioneer Masson did ninety years ago! Under present circumstances, Afghanistan is quite inaccessible for the European, and the excavation of Balkh must await more fortunate times. A name well known in connection with Bactrian coins is that of Sir Alexander Cunningham, a former Director-General of Archæology in India. Sir Alexander was one of the first workers in this field and a keen collector for nearly half a century. His unrivalled cabinet is in the British Museum.

I must now ask you to go back with me to the time of the last Bactrian king, Heliokles, and the destruction of the Greek power in Bactria by the Saka Scythian invasion. The term Scythian was applied indiscriminately to the nomadic peoples of Central Asia. It is generally accepted that the hordes which have successively appeared as conquerors, coming from the Asian steppes to the border provinces of Persia and India during the first century B. C. and the five

30	P R E - M O H A M M E D A N
	<p>succeeding centuries, are the following in the order of their arrival—the Sakas, the Kushans or Great Yue-Chi of the Chinese historians, the Lesser Kushans or Little Yue-Chi, and the Ephthalites or White Huns.</p> <p>The ultimate impelling force of these successive waves of invasion from Central Asia seems to have been the deterioration of the grazing grounds. The fall of the Greek princes in India was merely one incident in the history of that well-nigh irresistible migration of entire nations in arms, which, after harassing India, overran almost the whole of Europe, and under the leadership of Attila the Hun all but overthrew European civilization. India was again visited by a similar scourge in the times of Chingiz Khan and of Taimur; and the Mughal invasion of Babur was followed by the establishment of the Mongol or Mughal empire of Hindustan.</p> <p>According to Chinese accounts the Sakas were driven out of the countries north of the Oxus by the Yue-Chi. Re-</p>
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<p>tiring to the south and then to the east, they worked round over a region which roughly corresponds with the present provinces of Siestan, Sind and the Punjab. This, of course, meant the immediate overthrow of the Greeks in Bactria and the eventual destruction of the Greek power in the Punjab, possibly on the death of Menander. However, the Greeks must have continued to hold the Kabul Valley till the time of Hermaios. It is recorded that the Saka tribes who occupied Sakastene or Seistan afterwards separated and formed several distinct states under different rulers. This seems to be borne out by the three distinct dynasties of kings whose names have been preserved on their coins. That proceeding from Vonones and his lieutenants, Spalahores and Spalagadames, held to the west of the Indus; a second dynasty from Maues (or Moas) and the Azes, on both sides of that river; and a third in Sind and the west of Central India. To this last the great satrap Nahapana belonged.</p>	
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	<p>There is no direct historical evidence that the Sakas ever occupied the Punjab, but the three monarchs Moas, Azes and Azilises, whose coins are found abundantly in the Northwest Punjab and Hazara, are accepted as Saka Scythians. They issued an extensive silver and copper bilingual coinage, the Greek legend being quite legible. Like that of the Indo-Bactrian princes, this coinage is without a single specimen in gold, with the possible exception of a tiny gold piece in the Lahore Museum bearing the unique name Athama. In sharp contrast with the Indo-Bactrian coins the pieces of the Indo-Scythians never give us a portrait of the ruler. The coins prove that Azes had an Indian general, Aspa Varma, son of Indra Varma, who also served under the greatest of Azes' successors, Gondophares. Sir Alexander Cunningham makes Gondophares the founder of a separate Saka dynasty in succession to that of Moas, Azes and Azilises, but it is more natural to call this dynasty Indo-Parthian, as the portraits and the names</p>
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of the kings are Parthian. Abdagases was the nephew of Gondophares, and other members of the same line were Orthagnes, Pakores and Sanabares.

The currency of Gondophares is found in great abundance over a wide stretch of country from Peshawar to Delhi. His name is derived from the same origin as that of Gaspard, one of the three Wise Men from the East, and occurs in the Christian tradition concerning the later life of the Apostle Thomas. The apocryphal Acts of Thomas contain certain statements which discoveries, made since the commencement of the nineteenth century, have enabled us to test in the light of actual history. The narrative tells us that Thomas, much against his will and inclination, had to undertake the work of preaching the Gospel to the Indians, and that he was placed in the hands of an envoy of Gondophares, king of the Indians, who had been sent to Syria in search of an architect able to undertake the construction of a palace for his sovereign. Thomas, in company

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	<p>of this emissary, left by sea for India, which was reached after a rapid passage. Both proceeded to the Court, where Thomas made many converts, including Gondophares himself and his brother Gad, and ultimately died a martyr's death. That after so many centuries the actual existence of this king should have been proved by the discovery of his coins in India is most remarkable. The first specimens were found in Afghanistan by the American explorer Masson about the year 1833.</p> <p>The name of Gad, Gada, or Guda, the brother of Gondophares, according to Christian tradition, is possibly contained in a hitherto unelucidated Kharoshthi legend on a rare type of coins of Orthagnes. The reign of Gondophares covers the middle of the first century after Christ. About this time were issued the very abundant copper coins of an anonymous king who called himself the King of Kings, the Great Saviour (<i>Soter Megas</i>). All bear a three-pronged symbol, the peculiar device of this ruler.</p>
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The invasion of the chiefs, conventionally known as Indo-Scythian and Indo-Parthian, preceded that of the Kushan leader, Kujula Kadphises. I have already stated that the first wave of invasion from Central Asia, that of the Saka Scythians, extinguished the Greek power in Bactria, and later on in the Punjab, and left just a remnant of Greek sovereignty in the Kabul Valley. All alike were swept away by the onrush of the Kushans. The work of conquest was continued by the second Kadphises, styled Vima Kadphises on his coins, who overran the whole of the Punjab and Northwestern India. The dominions of Greeks, Indo-Scythians and Indo-Parthians were extinguished, and Northern India came under the Kushan sway.

It is generally held that the successors of Vima Kadphises were Kanishka, Huvishka and Vasu Deva. An inscription recently discovered at Mathura, thirty miles north of Agra, confirms the existence of a king Vasishka between Kanishka and Huvishka, but his coins

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	<p>have not been found, or possibly, still await identification. Of Kujula Kadphises and Vima Kadphises the only remains are their coins and the brief notices of the Chinese annalists; but of their successors, Kanishka, Huvishka and Vasu Deva, we possess many inscriptions, several of which are dated in an era which has been called the Vikrama Era. It may be remarked that there are a dozen different views regarding the date of Kanishka and the origin of the era. Some writers hold that Kanishka began to reign in A. D. 78. One authority places his initial date about A. D. 123, another as late as A. D. 278. On the other hand, Dr. Fleet held that the Kanishka group preceded that of Kadphises. The period covered by the reigns of the three monarchs, Kanishka, Huvishka and Vasu Deva probably exceeded a century and a half, and the Kushan sway at its zenith must have extended from Kabul to Bengal. The Kushan type of coin was perpetuated in Kashmir down to the sixteenth century of our era, a duration which I think</p>
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easily surpasses all records outside China; and Kushan copper coins and the derived types must have remained in common circulation for many centuries after the death of Vasu Deva.

It was in connection with the Buddhist faith that the memory of Kanishka was preserved by tradition, and the figure of Buddha appears on one gold and on a few copper coins. The wonderful relic casket unearthed near Peshawar bears an effigy of the great king Kanishka, and the Punjab Historical Society has published a photographic reproduction of the statue of Kanishka discovered a few years ago near Mathura. The coinage of the Kushans is very extensive in gold and copper, but only a single genuine silver coin is known and that was from a copper coin's die. It thus provides a striking contrast with the currency of the Indo-Bactrians, which is entirely lacking in gold. The coins of Vima Kadphises are bilingual, the Greek legend being quite legible and of some length. After his time the Kharoshthi language disappears

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	<p>once and for all from the coinage, the only possible exception to this statement being a coin sketched in 1842 and subsequently lost. It was published by Cunningham in his work on the coins of the Great Kushans.</p> <p>The money of the Kanishka group bears legends on both sides in legible Greek characters, but the kingly titles are usually Iranian. The Kushan gold coin is based on the Roman <i>aureus</i>. The entire coinage of Vima Kadphises is dedicated to Shiv, the third person of the Hindu Trinity, but the currency of Kanishka and Huvishka is adorned with the images and names of an extraordinary and extensive gallery of gods, goddesses and heroes with Greek, Indian and Iranian names. The full pantheon of some thirty deities is found on the gold issues of Kanishka and Huvishka. Like the Athenians of old, these Kushans were anxious to offer their devotion to all possible deities though they did not go so far as to dedicate a coin to the Unknown God. The gold coins of Vasu Deva gen-</p>
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erally give us a representation of Shiv; the copper issues have the standing king on one side, while on the other there is either Shiv and his bull, Nandi, or a seated goddess called Ardoksho. Vasu Deva was succeeded by obscure princes known as the Lesser Kushans, but after his time the design of the monetary issues becomes sadly debased and the inscriptions difficult to read.

At this point it is appropriate to give a short account of the earliest indigenous coins and then briefly to describe the various native issues down to the Mohammedan invasion. Reference will be restricted to the coins found in the Punjab and its vicinity, but will include some allusion to the Sassanian, Indo-Sassanian and White Hun pieces which are often found towards the North West frontier and in Kashmir.

The earliest coinages of the ancient world appear to have been mostly of silver and electrum (a mixture of gold and silver). The earliest coins of Lydia were made about 700 B. C. by impress-

40	P R E - M O H A M M E D A N
	<p>ing small punches or stamps on thick globules or buttons of electrum. Indian silver coins, which are certainly as old as the most ancient silver Greek issues, are the punch-marked flat pieces of indeterminate shape, but generally approximating to rectangular, adjusted to a fixed weight standard of about 56 grains. They are common all over India.</p> <p>The mode of fabrication is evident at once from an inspection of the coins. Silver was first beaten out into a sheet somewhat thinner than a quarter-dollar. Strips about half an inch in width were then cut off and each strip was divided into pieces of the same weight, approximately 56 grains, and a final adjustment of the weight was made by cutting small bits off one or more corners of the heavier blanks. The marks of the chisel still remain on the edges of the thicker pieces, which were broken off when the cut did not go clean through the strip of metal. It has been remarked that though the coins known as "punch-marked" are rude, ugly and without legends, and as a</p>
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rule not assignable to any particular kingdom or locality, they possess very special claims on the interest of the scientific numismatist as documents in the early history of coinage. They also appeal to the anthropologist as authoritative records of the religious, mythological and astronomical symbolism current throughout India for many centuries.

The term "punch-marked" adopted by general consent means that the devices on the coins are impressed, not by means of a die covering the entire *flan* but by separate punches applied irregularly on the surface. They often interfere with one another and in some cases are so numerous as to result in a confused jumble. Each of these marks may have been the special sign of some money-changer or tester, or of some locality. But this conventional explanation is not sufficient, because we ought to find more punch-marked coins in the earlier stages of their manufacture—that is to say, exhibiting not more than one, two or three marks. I have scarcely ever seen a coin

42	P R E - M O H A M M E D A N
	<p>which was not approximately covered with marks. It seems clear, therefore, that the surface must have been fairly well covered before a piece was released for circulation, and as a rule the marks are all different. Little difficulty is experienced in distinguishing the obverse from the reverse because the former contains several marks, while the latter is sometimes blank and is rarely distinguished by more than one device. More than three hundred different marks have been distinguished.</p> <p>It is difficult to say how old these punch-marked coins may be. They are alluded to in the Laws of Manu and even then they are called old. The Jataka stories speak of these coins as being current in the time of Buddha, that is, the sixth century B. C. In the early Greek money we have the youth of coinage, but in the punch-marked pieces of India we see money in the very infancy of the numismatic art. There is an allusion to Indian money in the record of Alexander's invasion of the Punjab.</p>
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Quintus Curtius, describing the reception of Alexander by Omphis, king of Taxila, says that the Indian ruler presented golden crowns to Alexander and his friends in addition to eight talents of coined silver. As gold was available, it is curious that the punch-marked coinage should consist only of silver and of copper. I think that the punch-marked series of the size and weight just described was intended to be an all silver currency. The true copper punch-marked coins are thick, massive pieces, which are very much rarer than the silver coins.

The Indian monetary system was essentially original. It differed from the Greek and from all other systems in its unit of weight as well as in its scheme of values. The unit of weight is the *rati*, the scarlet and black seed of the *Abrus precatorius*, the Indian liquorice, sometimes called the red-bead vine; and these seeds can be seen in use at the present day in any Indian goldsmith's shop. A single seed weighs something over $1\frac{3}{4}$ grains and the whole of the Indian money pro-

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	<p>ceeds by multiples of this well-known unit. There can be no doubt that the Indian monetary system is the invention of the Hindu mind.</p> <p>In addition to the punch-marked coins there are the thick copper coins of Taxila with an elephant on one side and a lion on the other, which were the prototype of the square Indo-Bactrian issues. These are true coins with an impression on each side. We also have massive rectangular pieces with blank reverses which are held to be more ancient than the foregoing, and go back to at least 350 B. C. They differ from the Greek money in every single point, being square in form, different in standard and Indian in type. They are utterly without inscriptions and must be regarded as a purely indigenous currency. It is a pity that we cannot point to definite coins as being issues of the famous Mauryan king Asoka, but the absence of legends makes the attribution impossible. The earliest gold coins of Northern India are one or two small pieces which were probably struck at</p>
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Taxila and bear the peculiar symbol which Sir Alexander Cunningham called the Taxila mark. The site of Taxila is twenty miles northwest of Rawalpindi in the Northwest Punjab and is being excavated with most valuable results by Sir John Marshall, Director-General of Archæology in India.

The holy city of Mathura (Muttra) is between Delhi and Agra, thirty miles north of the latter city, and ancient coins are found in considerable numbers beginning with the drachms of Menander and Apollodotos. The copper coins of the Kushans are abundant and there can be no doubt that Mathura belonged to their dominions; Ptolemy includes Mathura in the lower Punjab. The monetary issues of Mathura include coins of Indian rajahs of an indigenous type which are probably earlier than the coins of the Mathura satraps with Persian names. The most ancient of these foreign satraps seem to be the brothers Hagāna and Hagamāsha. Hagamāsha was probably followed by Rajuvula, whose son was

46	P R E - M O H A M M E D A N
	<p>Saudāsa. Rajuvula struck drachms in base silver resembling and associated with the coins of the Indo-Bactrian prince Strato II, as well as bronze coins after the manner of the rajahs. Mr. Vincent Smith places Rajuvula and Saudāsa somewhere about 125-100 B. C.</p> <p>The Taxila and Mathura coins are local issues. Though none of them bears the name of Taxila or of Mathura there can be no hesitation in assigning them to those places because they are not found elsewhere. Other ancient Indian coins are distinguished by the names of the tribes which struck them and so may be called tribal issues. Well-known tribal coins of the Punjab are those of the Odumbaras, Kunindas and Yaudheyas, who struck money in silver and copper, the silver coins being derived from the Indo-Bactrian drachms. The Yaudheyas were one of the most famous tribes of ancient India and were specially noted as warriors, their name being derived from the Sanskrit <i>yudha</i>, battle. They are mentioned by the grammarian Pānini,</p>
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who lived before the time of Alexander, as one of the warlike peoples of the Punjab, and they occupied the country on both banks of the River Sutlej.

To sum up, die-struck coins essentially original in form, design and size, existed in India before the invasion of Alexander the Great in 326 B. C. The Greek and Indian types of money mutually influenced one another as shown in the adoption by the Greeks of the Indian square shape and weight standard, and by the Indians of the drachm form and Greek artistic designs.

There can be little doubt that the Kushan empire endured till the third century after Christ, but the history of that century is wrapped in obscurity. We know, however, that in its latter part a chieftain named Gupta ruled in Bihar, his capital being in the vicinity of Patna. In the year 320 the throne was occupied by his grandson, Chandragupta I, who must be regarded as the real founder of the fortunes of his house. This chief established a special era, known in after-

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	<p>times as the Gupta Era ; and many of the inscriptions and coins of his successors are dated in this era. It continued in use in parts of northern and western India as late as the thirteenth century</p> <p>After a brief reign Chandragupta transmitted the crown to his son, Samudragupta, who at once entered on a career of aggressive conquest. After reducing the princes of Upper India, he turned his victorious arms against his southern neighbours, and celebrated the attainment of paramount power by the performance of the <i>asvamedha</i>, or horse sacrifice. After a long and prosperous reign, during which the River Narbada became the southern frontier of the Gupta empire, Samudragupta passed away and was succeeded by Chandragupta II about the year 375. Under this rule the Gupta empire reached the zenith of its power. He attacked, defeated and slew the satrap Rudrasimha, ruler of Kathiawar, and so extinguished the foreign Saka Scythian dynasty of the Western Satraps, which had lasted for four centuries. The Punjab</p>
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did not form an integral part of the Gupta empire, but there can be no doubt Gupta power and influence extended as far as Lahore. Six years ago a find of Gupta gold coins was made in the Hissar district of the Punjab province.

The Gupta currency is essentially a gold issue derived through the gold coinage of the Kushans from the Roman *aureus*. Silver and copper money of the Guptas is scarce and unknown before Chandragupta II. On the annexation of Gujarat and Kathiawar he recognized the convenience of the small silver currency of the Western Satraps, based on the Indo-Bactrian drachmas, and imitated it closely.

About 413 A. D. the empire passed into the hands of Kumaragupta I, son of Chandragupta II. This monarch during most of his long reign enjoyed undiminished power, but towards its close he was troubled by an invasion of the White Huns, which was repelled by his son Skandagupta. The latter, who acceded in 455, reigned till about 480. The in-

50	P R E - M O H A M M E D A N
	<p>cursions of nomad tribes from beyond the northwest frontier gradually shattered his power, and on his death the empire perished. Remnants of the dynasty survived in the eastern provinces for several generations.</p> <p>I have already shown that the Greek power in India was shattered by the invasions of Asiatic hordes—Scythians, Parthians and Kushans. The Huns appear on the scene in the fifth century after Christ. These barbaric Huns in their migration westwards divided into two main streams, one directed towards the valley of the Oxus and the other to that of the Volga; the former were known as Ephthalites, also by the name of White Huns.</p> <p>The tribe of Ephthalites was of considerable importance in the history of India and Persia in the fifth and sixth centuries of our era. The name Ephthalite is an attempt to reproduce the original name of the race, which was also called White Hun, because its members were of a comparatively fair appearance. In India they</p>
	N U M I S M A T I C N O T E S

were called Hūnas. Our earliest information about the Ephthalites comes from the Chinese chronicles, which state that they were originally a tribe of the Great Yue-chi, that is to say, they belonged to the same stock as the Kushans and lived to the north of the Great Wall. About the commencement of the fifth century after Christ they began to move westwards and for the next century and a half they were a menace to Persia, which they continually and successfully invaded though they never held it as a conquest. The Ephthalites defeated and killed the Sassanian king Firoz in A. D. 484, and the Persians were not quit of the White Huns until 557, when Anurshirwan (Khusru II) destroyed their power with the help of the Turks, who now make their first appearance in western Asia.

The Huns who invaded India appear to have belonged to the same race as those who molested Persia. The headquarters of the horde were at Bamian and at Balkh, the ancient capital of Bactria, and from these points they raided towards the

52	P R E - M O H A M M E D A N
	<p>south. As already related, Skandagupta repelled an invasion, but the defeat of the Persians in 484 stimulated the Huns, and at the end of the fifth century their chief, Toramana, penetrated as far as Malwa in Central India and held it for some time. His son Mihirgul, or Mihirakula (c. 510-540), made Sakala (Sialkot) in the Punjab his Indian capital, but the cruelty of his rule provoked the Indian princes to combine and attack him about the year 528. He took refuge in Kashmir, where after a few years he seized supreme power and attacked the neighbouring kingdom of Gandhāra, perpetrating terrible massacres. He died about 540 and shortly afterwards the Ephthalites collapsed under the attacks of the Turks.</p> <p>Our knowledge of the Indian Hūnas is chiefly derived from coins, from a few inscriptions, and from the accounts of the Chinese pilgrim, Hwen Tsang, who visited India just a century after the death of Mihirakula. The accounts of the Ephthalites dwell on their ferocity and</p>
	N U M I S M A T I C N O T E S

cruelty; they are represented as delighting in massacres and torture. The patron deity of Mihirakula, as clearly shown on his coins, was Shiv the Destroyer, and he acquired the reputation of a ferocious persecutor of Buddhism. Greek writers give a more flattering account of the Ephthalites, and these opinions were probably the basis of Gibbon's verdict when he described the White Hun as "a polite and warlike people who had vanquished the Persian monarch and carried their victorious arms along the banks, and perhaps to the mouth of the Indus." Nothing whatever is known of their language, but it is held to have been allied to Turkish. The White Huns were more barbarous than the Kushans and do not seem to have acted as other than a destructive force.

The Ephthalites were content to re-strike or imitate the coins of the countries which they overran. The silver coins, which are very much scarcer than the copper, are large thin pieces of the Sassanian model and as far as portraiture

54	P R E - M O H A M M E D A N
	<p>is concerned are little more than examples of calculated frightfulness. Many of the White Hun pieces are anonymous, but are usually distinguished by a peculiar mark which Cunningham called the Ephthalite symbol.</p> <p>After the extinction of the White Hun power in the middle of the sixth century, it seems likely that the Lesser Kushans again possessed the Punjab for about three hundred years, as we find more and more debased types of coinage which are quite illegible but are still to be recognised as descended from those of the Great Kushans and of the Sassanians. I may instance the ubiquitous <i>gadhiya paisa</i>, or ass money.</p> <p>In the ninth century we again get coins bearing distinct names, the well-known "bull and horseman" silver currency of the dynasty commonly called the Hindu kings of Kabul. The coins show a <i>couchant</i> bull on one side, and on the other a fully caparisoned warrior mounted on his charger. The name of the king is in Nagari characters over the bull. Copper</p>
	N U M I S M A T I C N O T E S

pieces are of the "elephant and lion" type, both animals being heraldic in design. The coinage of Samanta Deva is extremely common in the Punjab. These types continued till the conquest by the Ghaznavis early in the eleventh century and the "bull and horseman" type was perpetuated by these Mohammedan conquerors.

The Maharajahs of Kashmir issued very degraded copies in copper of the Kushan money, which occupy the period from the sixth to the sixteenth century—a wonderful instance of persistence of type.

In the United Provinces and Central India we have debased imitations of Sassanian coins without legends in silver and copper. There is one common issue with a representation of the boar incarnation of Vishnu and the title *Srimad Adi Varaha*, which we know was borne by Bhoja Deva, king of Kanauj, in 850-900 A. D. From the tenth century there are the abundant mixed metal and copper coins of the "bull and horseman" type in-

56	COINAGE OF INDIA
	<p>vented by the Hindu kings of Kabul which were struck by the Rajputs of Delhi, Ajmer and Kanauj. In Western and Southern India are the mediæval coins of the kingdoms of Vijayanagar and Mysore.</p> <p>We have now reached the commencement of Mohammedan rule in India and with it the end of that obscure period in which coins have actually created so much history.</p>
	NUMISMATIC NOTES

INDIA

PLATE I

AV



Diodotos

AR



Diodotos

AR

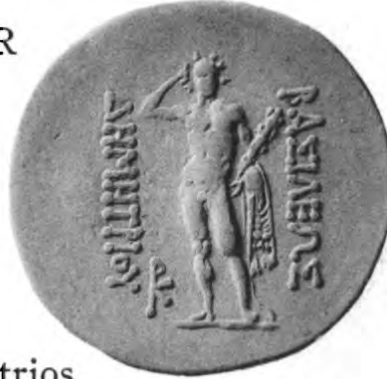


Euthydemos

INDIA

PLATE II

AR



Demetrios



Euthydemos II



Antimachos

INDIA

PLATE III



AR



AR



AR



Agathokles

INDIA

PLATE IV



AE



Pantaleon



AV



Eukratides



AR



Eukratides

INDIA

PLATE V

AR



AR



AE



Eukratides

INDIA

PLATE VI



AR



Heliokles



AR



Heliokles



AR



Archebios



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INDIA

PLATE VII



AR



Menander



AR



Menander



AR



Apollodotos



AE



Apollodotos

INDIA

PLATE VIII



AR



Azes



AE



Spalahores & Spalagadames



AE



Gondophares



AE



Soter Megas

INDIA

PLATE IX

AE



Kadphises

AV



Kanishka

AV



Huvishka

AE



Vasu Deva



Punched Marked Coins



Taxila



Amoghabuti of Kuninda



Yaudheyas



AV

Chandragupta II



AV

Chandragupta II



AV

Skandagupta



AR

Siladitya

INDIA

PLATE XII

AR



AR



AR



White Huns

INDIA

PLATE XIII

AE



White Huns

Billon



White Huns

Billon



Gadhiya Paisa

INDIA

PLATE XIV



AR

Samanta Deva (Kabul)



AE

Samanta Deva (Kabul)



AE

Tetomana (Kashmir)



Billon

Srimad Adi Varaha

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NUMISMATIC NOTES AND MONOGRAPHS

No. 14



ATTAMBELOS I OF CHARACENE

By GEORGE F. HILL, M.A.

THE AMERICAN NUMISMATIC SOCIETY
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55

NUMISMATIC NOTES AND MONOGRAPHS

EDITOR: SYDNEY P. NOE

NUMISMATIC NOTES AND MONOGRAPHS
is devoted to essays and treatises on subjects relating to coins, paper money, medals and decorations, and is uniform with Hispanic Notes and Monographs published by the Hispanic Society of America, and with Indian Notes and Monographs issued by the Museum of the American Indian—Heye Foundation.

ATTAMBELOS I OF CHARACENE

BY
GEORGE F. HILL, M.A.



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

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	I
<p>ATTAMBELOS I OF CHARACENE</p> <p>BY G. F. HILL.</p> <p>The five tetradrachms of this king, which were published in the recently issued volume of the British Museum Catalogue,¹ formed part of a hoard. Of this hoard 50 pieces in all were secured by Col. H. B. McCormick, D.S.O. Whether the hoard ever contained any more than these I am unable to state. It was reported to have been fetched across the border from Susa to Amara, where it was bought; but there may be no more truth in that statement than in another, to wit: that the coins had been buried in a bronze pot which, when examined by experts, proved to be of Arab workmanship and perhaps a thousand years later than the coins. That the coins had been in contact with copper is, however, undoubtedly true, for the forty-five coins which were brought to me by Col.</p>	
NUMISMATIC NOTES	

2	ATTAMBELOS I
	<p>McCormick were so thickly coated with a copper deposit that their real composition—a not very pure silver²—could hardly be surmised. They have all since been cleaned—nearly all with complete success; two, however, had considerable patches of deep-seated decay, which in the cleaning disappeared altogether, leaving large cavities on the obverses.</p> <p>Of the 45 new coins shown by Colonel McCormick, one has been kept by himself, and 22 by the British Museum. In the following list, an asterisk is placed against the weight of the specimens retained by the Museum. I proceed to give a complete list of all the coins known to me of this king—51 in all, including the Berlin specimen, or 52, if, as seems probable, the bronze coin at Paris is of him and not of the second Attambelos.</p> <p>All the coins are of the general description already given in the Museum Catalogue, as follows:</p> <p><i>Obv.</i> Head of King r., diademed, bearded, hair in curls; border of dots.</p>
	NUMISMATIC NOTES

OF CHARACENE	3
<p><i>Rev.</i> Herakles seated l., with club which rests on his r. knee. On r. downwards and on l. downwards, inscription (rarely preserved in full) ΒΑΣΙΛΕΩΣ ΑΤΤΑΜΒΗΛΟΥ on r., ΣΩΤΗΡΟΣ ΚΑΙ ΕΥΕΡΓΕΤΟΥ on l. Above r. arm, monogram; in exergue, date (too often mutilated).</p> <p>They fall into three groups, according as they have</p> <p>(A) a monogram on obverse in front of the head, and on the reverse a monogram or letter under the arm, as well as the monogram above it.</p> <p>(B) no monogram on obverse, but a letter under the arm as well as the monogram above it.</p> <p>(C) no monogram on obverse, and on the reverse no letter under the arm, but only the monogram above it.</p> <p>Contrary to the usual rule in the development of coins, the equipment of monograms and letters becomes less complicated as time goes on; the chronological order of the groups is the same as that given above.</p>	
AND MONOGRAPHS	

4	A T T A M B E L O S I
	<p style="text-align: center;">S E R I E S A.</p> <p>On the obverse, monogram  in front of head.</p> <p>1-5. On the reverse,  above arm,  below; date, when legible $Z \Xi \Sigma$ (267). Weights, 15.09 grammes, 14.78 gr.*, 13.41 gr., 12.97 gr.* (<i>Pl. I</i>), 12.82 gr.</p> <p>6. On the reverse, obscure monogram³ above arm,  below date $H \Xi \Sigma$ (268). Wt. 11.24 gr.* (<i>Pl. I</i>).</p> <p style="text-align: center;">S E R I E S B.</p> <p>No monogram on obverse; on reverse, above arm  (No. 7) or  (Nos. 8-13); below, a letter.</p> <p>7. Letter under arm obliterated. Date, $\Theta \Xi \Sigma$ (269). Wt. 10.50 gr.* (B.M.C. p. 291, No. 1).</p> <p>8. Letter under arm, Z. Date, $\mathbb{Z} \Xi \Sigma$ Wt. 14.47 gr.</p> <p>9. Letter under arm, Z. Date illegible. Wt. 13.37 gr.*</p> <p>10. Letter under arm, P. Date illegible. <i>Same obv. die as No. 9.</i> Wt. 14.02 gr.* (<i>Pl. I</i>).</p> <p>11. Similar to No. 10, but from differ-</p>
	N U M I S M A T I C N O T E S

OF CHARACENE

5

ent dies. Date, $\square(?)\Sigma$ (270). Double-struck on rev. Wt. 11.88 gr.

12. Letter \times (?) under arm. Date, $\square\Sigma$ (270). Wt. 13.15 gr*.

13. Letter \times under arm. Date off the flan. Wt. 10.74 gr.* (B.M.C. p. 292, No. 5).

SERIES C.

No monogram on obverse; on reverse, monogram \mathbb{H} above arm.

14, 15. Date, $\mathbb{B}\square\Sigma$ (272). Wts. 13.68 gr.* (B.M.C. p. 291, No. 3) and 13.72 gr.*

16, 17. Date, $\Gamma\square\Sigma$ (273). *Both from same obv. die as No. 15.* Wts. 10.69 gr.* and (?) (the latter retained by Col. McCormick).

18, 19. Date, $\Gamma\square\Sigma$. *Both from same obv. die.* Wts. 13.46 gr.* (Pl. II) and 10.37 gr.

20. Date, $\Gamma\square\Sigma$ or $\Gamma\Pi\Sigma$ (283). Wt. ? (Berlin; Waddington, *Mélanges* Pl. VI. 7, where the date is taken to be $\Gamma\Pi\Sigma$). The bottoms of the letters of the date are off the flan or not struck up, judging from a cast which I owe to Dr. Regling.

AND MONOGRAPHS

6	A T T A M B E L O S I
	<p>21. Date, ΕΘΣ (275). Wt. 12.53 gr.*</p> <p>22. Date, Ε(?)ΘΣ. Wt. 9.95 gr.*</p> <p>23. Date, ΘΘΣ (276). <i>Same obv. die as No. 22.</i> Wt. 12.43 gr.*</p> <p>24. Date, Θ[Θ]Σ. <i>Different dies.</i> Wt. 11.22 gr.</p> <p>25, 26. Date, ΖΘΣ (277). <i>Both from same obv. die.</i> Wts. 15.07 gr.* (Pl. II), 12.09 gr.*</p> <p>27, 28. Date, ΗΘΣ (278). <i>From the same pair of dies.</i> Wts. 14.13 gr.* (Pl. II), 11.54 gr.</p> <p>29. Date, ΗΘΣ. <i>Different dies.</i> Wt. 13.98 gr.</p> <p>30. Date, ΘΘΣ (279). Wt. 13.54 gr.* (B.M.C. p. 291, No. 2).</p> <p>31. Date, ΘΘΣ. Wt. 12.13 gr.*</p> <p>32. Date, ΡΘΣ. Wt. 12.15 gr.* (B.M.C. p. 292, No. 4). I cannot explain the very puzzling digit sign. In some lights there seems to be a middle horizontal. If the right vertical were continued downwards and a bottom horizontal supplied, we should have a square theta, such as is used in the name of the next king, Thionesios. The loss of the</p>
	N U M I S M A T I C N O T E S

missing parts would be accounted for by a slight depression in the surface which occupies their place. Judging by the style of the obverse, the coin belongs to about this period of the reign. The weak point of this explanation is that a round theta seems to be used on Nos. 30 and 31.

33. Date, $\Sigma\Box\Sigma$. Wt. 11.20 gr.*

34. Date quite illegible. *Same obv. die as No. 33.* Wt. 11.50 gr.

35, 36. Date, $\Sigma\Box\Sigma$ or $\Sigma\Pi\Sigma$. *From same obv. die.* Wts. 12.97 gr.*, 12.18 gr. (a large cavity on obverse of the latter).

37-40. Date, $\Sigma\Box\Sigma$ or $\Sigma\Pi\Sigma$. Wts. 12.14 gr., 11.96 gr., 11.94 gr., 10.04 gr.

41. Date, $\Gamma\Pi\Sigma$ (283). Wt. 12.42 gr.* (large cavity on obverse).

42. Date, $\Delta\Pi\Sigma$ (284). Wt. 12.30 gr.* (*Pl. III*).

43. Date, $\Sigma\Pi\Sigma$. *Same obv. die as No. 42*; therefore the first letter of the date is probably Γ , Δ or Ξ .

44, 45. Date illegible. *Both from same obv. die.* Wts. 13.20 gr.*, 12.72 gr.

46, 47. Date illegible. *Both from*

8	ATTAMBELOS I
	<p><i>same pair of dies.</i> Weights 11.66 grammes, 10.11 grammes.*</p> <p>48-51. Date illegible. Wts. 14.05 gr., 11.63 gr., 11.31 gr., 9.93 gr.</p> <p>52. The bronze coin with Nike as reverse type (Waddington, <i>Mélanges</i>, p. 89, No. 6, here <i>Pl. III</i>) seems to me, judging from a cast, to be of this Attambelos rather than of the second.</p> <p>The first point to be noted is that if the date on the coins of Thionesios I were really ΓΟΣ, as it has always been read, he would be an intruder in the middle of the reign of Attambelos I. But, as Mr. Robinson has observed to me, the omicron on these coins is always square, and the middle sign is therefore presumably a koppa. His suggestion is completely confirmed by M. Babelon who, having re-examined the coins, kindly informs me that the beginning of the tail of the koppa is discernible on the two out of the three specimens on which the date is legible at all. (See <i>Pl. III, A.</i>) We thus have the dates 267 to 284 (46/5-29/8 B.C.) fixed in the chronology</p>
	NUMISMATIC NOTES

OF CHARACENE	9
<p>of Attambelos I and 293 (20/19 B. C.) in that of Thionesios I.⁴ There thus still remains a gap of nine years to be supplied between the dates established for the two kings; and, further, since it is uncertain whether the latest date of Tiraos II is 261 or 264, there may be a year or two to add on at the beginning of the reign of Attambelos.</p> <p>The next king known in succession to Thionesios I is Attambelos II. His portrait is easily distinguishable from that of Attambelos I by the treatment of the hair; both are in long locks, but those of the first king are frizzed, whereas on the head of the second they hang more or less lankly. A good specimen is figured in <i>Pl. III, B</i>. This is the piece the date on which M. Babelon⁵ has read ΕΠΣ. Since this would make Thionesios I an intruder in his reign, the reading would seem to require revision. The coin is slightly double struck, and on the cast I seem to see that the hundreds figure may have been a Τ of which only the right-hand portion of the horizontal</p>	
AND MONOGRAPHS	

10	ATTAMBELOS I
	<p>and the upper portion of the vertical remain legible. It bears the same monogram as coins dated $\Gamma IT(?)$, ζIT and \mathbf{IIT}⁶ and resembles them also in the style of its lettering. The earliest date otherwise read on coins of this king is $\mathbf{EQ\Sigma}$ (Berlin).⁷ Taking this, then, as the first fixed point in his reign, we have a gap of 12 years between him and Thionesios I.</p> <p>It is unlikely that these gaps will be filled by the discovery of other kings, because, as I have remarked elsewhere, the series we now know squares with the numbers given by a passage of Pseudo-Lucian which caused some difficulty before the discovery of Attambelos I.</p> <p>I am unable to offer any certain explanation of the monograms and letters which distinguish these coins. But it seems probable that those on the reverses represent officials in charge of the mint, for they are used continuously for a shorter or longer period of years, and do not recur after an interval, as they might if they represented place names. The</p>
	NUMISMATIC NOTES

OF CHARACENE	II
<p>monogram on the obverse of Series A is possibly meant for the king's own name, like the somewhat similar counter-mark, which is found on coins of Attambelos III and Thionesios III.⁸ The letters under the arm cannot represent months, since they run to X.</p> <p>The weights, it will be observed, are excessively irregular. This may partly be due to the cleaning of the coins; although nothing has been deliberately removed, chemical changes in alloy may have affected the weights of some of the pieces.</p>	
AND MONOGRAPHS	

12	ATTAMBELOS I
	<p data-bbox="885 562 1008 594" style="text-align: center;">NOTES</p> <p data-bbox="597 625 1299 716">¹ <i>Arabia</i> &c., pp. 291-2. In the course of these notes I have made a few tacit corrections in my previous descriptions of these coins.</p> <p data-bbox="597 726 1299 793">² But easily distinguishable from the metal of the succeeding kings, which is very base.</p> <p data-bbox="597 804 1299 871">³ All that is clear is a loop resembling the lower part of a B.</p> <p data-bbox="597 882 1299 972">⁴ Assuming the use of the Seleucid era, and not that of Alexander; a point on which Col. Allotte de la Fuÿe will have something to say.</p> <p data-bbox="630 982 1279 1014">⁵ <i>Mélanges numismatiques</i> iii (1900) p. 230.</p> <p data-bbox="597 1024 1299 1182">⁶ B.M.C. p. 293. Nos. 1-3. I note here that No. 5 of this king has the same monogram as his earlier coins of ⲙⲟⲩ, ⲉⲟⲩ and ⲧ, and should therefore have been placed before No. 1, although its date is illegible.</p> <p data-bbox="630 1192 1203 1224">⁷ There is also one at Paris with ⲙⲟⲩ.</p> <p data-bbox="630 1234 1003 1266">⁸ B.M.C. <i>Arabia</i>, p. cciii.</p>
	NUMISMATIC NOTES

ATTAMBELOS I

PLATE I



4



6



10

ATTAMBELOS I

PLATE II



18



25



27



ATTAMBELOS I

PLATE III



42



51
Æ



A

A



B



B

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